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## Journal of the Society of Arts.

FRIDAY, APRIL 23, 1869.

### Announcements by the Council.

#### ORDINARY MEETINGS.

Wednesday Evenings at eight o'clock :—

APRIL 28.—“On the Duties of the Architect with reference to the Arrangement and Structure of a Building.” By ROGER SMITH, Esq. On this evening Sir Digby Wyatt will preside.

MAY 5.—“On the Formation of Industrial Settlements in our Colonies.” By Col. FRANCIS C. MAUDE, C.B.

MAY 12.—“On the Ventilation of Drains.” By JAMES LOVEGROVE, Esq., Assoc. Inst. C.E.

MAY 19.—“On the Progress of the Colonies.” By JOHN ROBINSON, Esq., of Natal.

MAY 26.—“On Silk Supply.” By THOMAS DICKINS, Esq., President of the Silk Supply Association.

#### CANTOR LECTURES.

A Course of Four Lectures “On Applied Mechanics” is now being delivered by JOHN ANDERSON, Esq., C.E., Superintendent of Machinery to the War Department, as follows :—

LECTURE III.—MONDAY, APRIL 26TH.

Applied Mechanics in relation to Natural Laws in processes.

LECTURE IV.—MONDAY, MAY 3RD.

Applied Mechanics in relation to Natural Power.

Each lecture will begin at eight o'clock. These Lectures are open to Members, each of whom has the privilege of introducing two friends to each lecture. Tickets for this purpose have been forwarded to each Member.

#### COMMITTEE ON INDIA.

Conferences are now in course of being held for the discussion of various subjects connected with India.

The following arrangements have been made for the remaining three conferences :—

FRIDAY EVENING, APRIL 30.—“Indian Fibres.” By LEONARD WRAY, Esq. The Chair will be taken by the Hon. George Campbell.

FRIDAY EVENING, MAY 14.—“Waste Lands.” By the Hon. GEORGE CAMPBELL.

FRIDAY EVENING, MAY 28.—“Trade with Central Asia, Thibet, and South-Western China.”

At these Meetings the chair will be taken at 8 o'clock, and the discussion will be opened by a paper.

This evening, Friday, the 23rd instant, the adjourned discussion on Mr. HYDE CLARKE's paper “On Hill Settlements and Sanitaria,” will be opened by Colonel Hayley. The Chair will be taken by Lord William Hay.

Members of the Society interested in Indian questions are invited to attend.

#### PISCICULTURAL COMMITTEE.

On Friday Evening, May 7th, a paper “On Oyster Culture and Legislation” by ARTHUR F. PENNELL, Esq., will be read and discussed. The Chair will be taken at eight o'clock.

Members of the Society interested in this subject are invited to attend.

#### FINAL EXAMINATIONS, 1869.—NOTICE TO CANDIDATES.

The Court of the Worshipful Company of Coachmakers have resolved to place one silver and one bronze medal of the Company at the disposal of the Council of the Society of Arts, to be presented to the candidates (actually engaged in the trade of coach-building) who shall pass the best examination in “Free-hand Drawing” and “Practical Mechanics.”

These medals will not be awarded unless, in the opinion of the Council, the candidates possess sufficient merit.

#### ALBERT MEDAL.

The Council will proceed to consider the award of the Albert Medal early in May next. This medal was instituted to reward “distinguished merit in promoting Arts, Manufactures, or Commerce,” and has been awarded as follows :—

In 1864, to Sir Rowland Hill, K.C.B., “for his great services to Arts, Manufactures, and Commerce in the creation of the penny postage, and for his other reforms in the postal system of this country, the benefits of which have, however, not been confined to this country, but have extended over the civilised world.”

In 1865, to his Imperial Majesty the Emperor of the French, “for distinguished merit in promoting, in many ways, by his personal exertions, the international progress of Arts, Manufactures, and Commerce, the proofs of which are afforded by his judicious patronage of Art, his enlightened commercial policy, and especially by the abolition of passports in favour of British subjects.”

In 1866, to Professor Faraday, D.C.L., F.R.S., for “discoveries in electricity, magnetism, and chemistry, which, in their relation to the industries of the world, have so largely promoted Arts, Manufactures, and Commerce.”

In 1867, to Mr. W. Fothergill Cooke and Professor Charles Wheatstone, F.R.S., in recognition of their joint labours in establishing the first electric telegraph.

In 1868, to Mr. Joseph Whitworth, F.R.S., LL.D., “for the invention and manufacture of instruments of measurement and uniform standards, by which the production of machinery has been brought to a degree of perfection hitherto unapproached, to the great advancement of Arts, Manufactures, and Commerce.”

The Council invite Members of the Society to

forward to the Secretary, before the 2nd May, the names of such men of high distinction as they may think worthy of this honour.

#### POSTAGE OF PRINTED MATTER AND PARCELS.

The Council have appointed a Committee to promote the adoption of reduced rates of postage, particularly in reference to printed matter and parcels.

#### SUBSCRIPTIONS.

The Lady-day subscriptions are due, and should be forwarded by cheque or Post-office order, crossed "Coutts and Co.," and made payable to Mr. Samuel Thomas Davenport, Financial Officer.

### Proceedings of the Society.

#### THAMES EMBANKMENT COMMITTEE.

The fifth meeting of the Committee took place on Tuesday, the 13th inst., at 11 a.m. Present—Lord Elcho, M.P., in the chair; Sir Charles Trevelyan, K.C.B., Col. Ewart, R.E., Captain Ducane, R.E., Messrs. Henry Cole, C.B., Westmacott, R.A., G. E. Street, A.R.A., C. F. Hayward, Baillie Cochrane, and Hyde Clarke.

Mr. F. W. SHEILDS attended, and said that he was prepared to state the results which he had arrived at with regard to the comparative advantages of the Carey-street and Embankment sites for the new law courts, with special reference to the question of the approaches.

The CHAIRMAN said that the discussion on the law courts had been closed, but he should like to know whether Mr. Shields had considered the question of making a carriage-road from the Strand to the Embankment by way of Essex-street.

Mr. SHEILDS replied that he did consider that matter in preparing his plan for the Thames Embankment, which was approved by the Royal Commission of 1860, presided over by Lord Mayor Cubitt. At that time he contemplated leaving Essex-street in its present condition, with an access by means of steps to the Embankment, simply because, as he understood at the time, the expense was to be limited. Apart from the question of expense, there would be no engineering difficulty in forming a carriage-road. The ground would have to be cleared, and the road widened, and sloped from the building line of the Embankment to that of the Strand. The gradient would be 1 in 28. The gradient allowed by Parliament in the case of alterations of accommodation roads crossed by railways was 1 in 20, and for turn-pike roads 1 in 30.

Sir CHARLES TREVELYAN being requested to place before the Committee the result of his investigations into the contemplated improvements of the Temple, said—I first wish to call attention to the great historical importance of the Temple. From the reign of Henry II. to the reign of Edward III. it was the head-quarters in England of the Knights Templars, and was thereby indissolubly connected with the ancient East and with the foundations of our faith. From the time of Edward III. to the present it has been in the possession of the lawyers, having become at an early period a university of Common Law, as distinguished from the Roman and Ecclesiastical law, which had its chief supporters at Oxford and Cambridge. The Temple became a popular place of resort and education for our young nobility and gentry, and held a distinguished position in our social

system. This made it natural for Shakespeare to place the germ of the great civil war of the Roses in the Temple-gardens—

"The brawl to-day  
Grown to this faction in the Temple-garden  
Shall send between the red rose and the white,  
A thousand souls to death and deadly night."

The situation of the Temple is one of extreme beauty and interest. It is situated on the rising river bank, open on one side to the Thames, while on the other is seen a diadem of towers, consisting at present of the beautiful lantern tower of St. Dunstan's, and the large handsome tower of the new Record Office; and it may be hoped that at no distant period, looking from the Temple-gardens to the west and north-west, we shall see the lofty towers of Mr. Street's new building between the Embankment and the Strand. The difference of level between the Strand and Carey-street is so slight (Mr. Street having arranged to reduce it to twelve feet), that the towers of the law courts on the Strand front of the Embankment site will produce as great an effect as if they were on the Carey-street site.

The existing buildings of the Temple are of no mean kind. First of all there is that famous old church, built according to the exact model of the Church of the Holy Sepulchre at Jerusalem, which has been restored and embellished by the Templars with singularly good taste and unsparing expense. Then there is the grand and beautiful hall of the Middle Temple, erected in the time of James I., during the treasurership of Plowden; and the Benchers of the Inner Temple, under the treasurership of Mr. Whitmore, are erecting a new hall, which will not suffer in comparison with Plowden's old hall. The buildings around the Temple-garden, which form three sides of a square, with the fourth side open to the river, although not the best that could be constructed at the present day, are very good considering the period when they were erected, and are capable of much improvement.

The general plan that has been formed—for it has been heard of from so many quarters that there can be no doubt of the fact—and which occupies the minds of the Templars at present, is one which the position of the ground and the nature of the existing buildings naturally suggest, viz., first to extend the terrace of Somerset-house, and the terrace proposed to be erected in front of the new Law Courts, across both the Middle and Inner Temple, to Alsatia; not necessarily on the same level, or in the same style of architecture, because the terrace would naturally conform to the plan of the buildings opposite to which the different sections of it were placed. The level of the terrace in front of the new Law Courts and Somerset-house would probably be the same; but in passing from the new Law Courts to the Temple there would probably be a slight fall. The position of the existing buildings of the Temple has suggested what appears to be the only plan yet thought of for completing them in connection with the Embankment, viz., to extend Paper-buildings in the Inner Temple, on one side of the Temple garden, to the terrace, with a T head of handsome architectural elevation opening on the terrace, and to extend Harcourt-buildings in the Inner Temple, and Plowden-buildings in the Middle Temple, on the other side of the garden, to the same terrace with a similar T head, and another architectural elevation. So that we should have the famous old historical garden opening upon the terrace and the river between two grand, widely-extended portals, completed according to the best style of which modern art is capable.

There remains the new Middle Temple library, as to which there is a difference of opinion. Many object to it on the ground of taste, and others on the ground of its being impossible to warm it properly. It is said to be unsuitable to study owing to the cold in winter. A friend told me he had been there four times to consult law books and had caught four colds. Anybody who passes it may see that there has been a settlement in the

upper part of the building in front, and an unpleasant effect is produced by the library having been built across the line of the adjoining buildings. However that may be, many of the Templars are dissatisfied with it, and suggestions have been made for reconstructing it in connection with the new Law Courts. The ground upon which the library stands is not in the least essential to the plan of the Law Courts on the Embankment site; but, nevertheless, it has been suggested that the line of the new Law Courts should be taken from the Strand across the centre of the library, and that the latter should be reconstructed by the society, in a manner not open to the objections named.

The CHAIRMAN—You mean that the Templars themselves are willing to consider this.

Sir CHARLES TREVELYAN—Many of the Templars are prepared to consider this, but whether or not they are a majority I cannot say.

All really good public buildings and monuments have an importance from the amount of popular enjoyment they afford; from their educational influence in elevating and refining public taste, and from the effect they have in binding the nation together, by making the whole people proud of their capital, especially in these days of constant locomotion, which brings such multitudes of visitors to see the metropolis. For instance, Italy, France, and other countries have typical examples of ancient Egyptian civilisation present to the eyes of their people, but we have no such advantage in this country. Since Sir John Abercrombie's expedition to Egypt it has been a favourite idea to bring one of the two obelisks called Cleopatra's needles to this country. The Marquis of Westmeath, who, I believe, is, with the exception of F. M. Sir John Burgoyne, the only surviving officer of that expedition, having been only 17 years of age at the time, has kindly furnished me with some papers upon the subject, which have a peculiar interest. In 1851, a representation was made by all the officers of high rank then surviving, who had served in Egypt, to Lord John Russell, then Prime Minister, of which the following is a copy:—

"United Service Club, 12th July, 1851.

"My LORD,—Towards the close of the last session of Parliament (which was too late, your lordship observed, to do anything in the matter that session) you were pleased to receive, very graciously, a deputation composed of officers of the army and navy, who, having served in Egypt, expressed to you their anxious desire that the obelisk known by the appellation of Cleopatra's Needle, and which belongs to England, should be brought home, 'for the purpose of being placed upon some elevated site in this metropolis, in order to perpetuate the recollection of the glorious deeds of our fleet and army in that country.'

"The question has been this session touched upon in both Houses, and, the obelisk having been presented by Mehemet Ali, in 1820, to our then Sovereign King George the 4th, and accepted of, as will be seen by the annexed copy of a letter from Mr. Planta, at that time Under Secretary of State, addressed to Mr. Briggs, our consul in Egypt, surely England is bound, by honour and courtesy, after having accepted the gift, to take the necessary measures to have the obelisk brought home, and to effect which object we would again solicit your assistance.

"We have the honour to be

"Your lordship's most obedient servants,

"(Signed)

James Kempt, General.  
Charles Ogle, Admiral.  
Thomas Cochrane, Vice-Admiral.  
John Wilson, Lieut.-Gen.  
John Hanbury, Lieut.-Gen.  
John Duffy, Major-Gen.

Thomas Kenah, Major-Gen.  
John Rolt, Major-General.  
D. DeLamotte, Major-Gen.  
E.I.C. Service.  
Edward Lloyd, Capt. R.N.  
John Forbes, Capt. R.N.

"The Right Hon. Lord John Russell, M.P.,  
"First Lord of the Treasury, &c., &c."

"N.B.—Major-General DeLamotte saw the obelisk about four years ago, when it was, he says, in very good preservation, but hacked a little at the angles."\*

(Enclosure.)

"Foreign Office, 25th July, 1820.

"SIR,—In answer to your letter of the 24th instant, and with reference to the several communications which you have made, of the wish of His Highness the Pasha of Egypt to present to His Majesty one of the obelisks commonly called Cleopatra's Needles, I am directed by Lord Castlereagh to acquaint you that His Majesty has been graciously pleased to accept this testimony of good will on the part of His Highness, and to direct an officer to proceed without delay to Alexandria, in order to inquire into and report upon the practicability and the most proper means of transporting this valuable relic of antiquity to this country.

"I am, &c.,

JOSEPH PLANTA, JUN.

"(Signed)

"To Samuel Briggs, Esq."

The CHAIRMAN asked what was the result of the memorial.

Sir CHARLES TREVELYAN—I cannot say; I have not gone fully into it. But the following note to the Marquis of Westmeath will show that his Royal Highness Prince Albert took a warm interest in the project:—

"Windsor Castle, January 22nd, 1847.

"My DEAR LORD,—I have not failed to communicate to the Prince the contents of your letter of the 21st inst., and have received his Royal Highness's commands to thank you for the trouble you have taken with regard to the Egyptian obelisk. His Royal Highness has already written upon the subject, and will take it in hand, with a view, if possible, to have that monument of the splendid services of the British army in that quarter removed to England. . . .

"I have the honour to be, &c.,

"C. B. PHIPPS."

After the lamented death of his Royal Highness, one of the proposals for erecting a monument to his memory was that Cleopatra's needle should be brought to this country and erected on the site of the first Exhibition in Hyde-park; and her Majesty was understood to have taken much interest in the proposal. There was said to be no obstacle to bringing the obelisk into the Thames, but that there would be very considerable difficulty in conveying it from the Thames to Hyde-park.

After the recent discussion of this subject, at the instance of Colonel Sir James Alexander, Lord Houghton was so good as to say to me, "You are quite right about bringing an Egyptian obelisk to this country; but the one to bring is, not Cleopatra's Needle, but the remaining obelisk of Luxor, the fellow of the one which has been erected by the French in the Place de la Concorde." Luxor is the modern Arabic name, but the city is Egyptian Thebes of the hundred gates; and these beautiful obelisks, which are in the highest style of ancient Egyptian art, formed the portal of the great Temple of Thebes. Wilkinson, in his single volume, published by Murray in 1835, entitled "Topography of Thebes, and General View of Egypt," makes this mention of them:—"The two beautiful obelisks of red granite, whose four sides are covered with a profusion of hieroglyphics, no less admirable for the style of their execution than for the depth to which they are engraved, which, in many instances, reaches two inches." In the volume referred to there are two plates, one showing the two obelisks *in situ*, and the other showing one *in situ* and the other in process of removal. These obelisks were given by Mohammed Ali, one to the French and the other to the English. The French brought theirs to Paris; first securing it in a kind of gigantic packing-case, and then

\* I have twice seen it. Only an angle of the base, from which the donkey boys knock off strips for visitors, appears above the sand.

† Consul-General at that time in Egypt.

lowering it by means familiar to engineers, they conveyed it to a Nile boat, and so by water to Alexandria, and thence to the Seine. In the same way, and with the advantage of their experience, the other obelisk might, with the help of one of our many old Admiralty hulks, be easily brought to the Thames, and thence to the Temple-gardens. The whole process of transferring the French obelisk from Thebes, in Upper Egypt, to Paris, has, I believe, been recorded in detail in a treatise on the subject.

Whatever may be the general advantages of public monuments, there will be a peculiar advantage in having in this country and in this great metropolis so perfect and beautiful a specimen of that by-gone civilisation, the earliest on record, inasmuch as it will suggest to all who see it that there have been other forms of civilisation, which have had characteristic merits of their own. The English and French would then have fellow obelisks, and the Temple-gardens would form a site peculiarly appropriate to the one belonging to us. The difficulty which prevented the transfer of Cleopatra's needle to Hyde-park will not occur in this case, the Temple-gardens being close to the Thames. In the centre of the Temple-gardens, with all London streaming before it on the Embankment and river, the obelisk will be in an extremely conspicuous situation. The Temple is especially connected with the East. It derived its name from a half-religious, half-warlike association, the object of which was the protection of the Holy Sepulchre and the Temple of Jerusalem from the Infidels, and to this day it preserves that name. Its occupants are still called Templars, and the old church still remains without alteration, the exact model of the church of the Holy Sepulchre. As Egypt is associated in so many ways with Palestine, there is a special fitness in placing the obelisk in the Temple-gardens; and there is also this subsidiary advantage, that it would not be dwarfed by the surrounding buildings, but the full beauty of its proportions would be seen.

The CHAIRMAN said he believed, at the previous meeting, Sir Charles Trevelyan advocated putting the railway station in front of the Temple-gardens.

Sir CHARLES TREVELYAN said "No;" he thought it should be incorporated with the terrace at the south-eastern end of the new law courts. He was not aware whether the Templars would feel inclined to give up any ground for the purpose of a railway station, nor had he thought it worth while to make the inquiry.

Mr. COLE thought the Committee was appointed to endeavour to protect the Embankment from the spoliation with which it was threatened, and not to form any specific plans. They had already recommended that all designs for building on the Embankment should be publicly exhibited, and approved by an authority responsible to Parliament. He quite agreed with the resolution passed at the last meeting on the subject of the railway station, but he did not think they ought to go further into detail.

Mr. BAILLIE COCHRANE thought that as the railway was in progress it was most important that they should come to some opinion as to the stations, which really would affect the whole of the public buildings on the Embankment.

(Lord Elcho being obliged to leave at this stage, the chair was taken by Mr. Hyde Clarke.)

The CHAIRMAN remarked that there was this difficulty with regard to the railway itself—that it was already in progress.

Sir CHARLES TREVELYAN quite agreed that as the Committee was to report upon the best mode of dealing with the Thames Embankment, the point which was now raised was of great importance, and ought to be taken into consideration at the earliest opportunity. Returning to the subject of the Temple-gardens, Sir Charles Trevelyan said his statement did not go beyond this, that a considerable number of the

Templars contemplated plans of the nature which he had described; nor had he heard of any alternative plan. He believed they all agreed that the proper way of laying out the Temple was in the beautiful open manner in which it is now laid out, giving full prominence to the garden, which is described by Charles Lamb in his "Elia," as "the genteel place in London." Of course, if the great gap between the Temple and Somerset House were properly filled up, it would be a great additional inducement to the Templars to do justice to their own beautiful site.

Mr. COLE asked if there were any other public buildings of historical interest or architectural value near to these buildings which could be brought into connection with them.

Sir CHARLES TREVELYAN said the only other public building in the neighbourhood of any importance was the new Record Office, but that was cut off from the Carey-street site by Chancery-lane and the Law Institution. The Embankment site was very preferable in regard to the adjoining buildings; in fact it would be difficult to conceive one more advantageously situated in respect to surrounding objects. It was in immediate communication with the two Temples on one side; with the beautiful historic building of Somerset-house on the other; with the river Thames and the handsome buildings which will doubtless be soon erected on the opposite Embankment, to the south; and with the fine old thoroughfare of the Strand, and the proposed new offices and chambers for solicitors on the Carey-street site to the north.

The Committee then adjourned.

The sixth meeting of the Committee took place on Tuesday, the 20th inst., at 12 o'clock. Present:—Earl Grosvenor, M.P., in the chair; Lord Henry G. Lennox, M.P., Sir Charles Trevelyan, K.C.B., Colonel Scott, R.E., Colonel Ewart, R.E.; Captain Ducane, R.E.; Messrs. H. Cole, C.B., Baillie Cochrane, Seymour Teulon, and C. F. Hayward.

The following resolution was proposed by Sir Charles Trevelyan, seconded by Lord Henry Lennox, and passed:—

"At the first meeting of this Committee on the 9th March last, the following resolution was passed:—'That this Committee inquire whether any, and if so what, controlling power over public works in the metropolis is vested in, and exercised by, any Government department, and whether it might be desirable to establish some such controlling power, in the event of its appearing that none such at present exists.' It has since become apparent, from the proceedings which have been taken by this Committee, that the mode of dealing with the Thames Embankment upon which the improvement of London essentially depends, had been left to the accident of the varying tastes and interests of the different owners of property upon the Embankment. It is also to be observed that the Temple is the dividing point between two jurisdictions, the Corporation of the City having authority to the eastward, and the Metropolitan Board of Works to the westward of that point. For these reasons, in addition to all the previous evidence on the subject, the Committee is strongly of opinion that it should form part of the duty of a responsible minister to exercise a controlling power within the necessary limits over all operations bearing upon any public works in which the convenience and embellishment of the metropolis of this country are concerned, and that the Council be requested to prepare a petition to this effect to be submitted to both Houses of Parliament, and that a memorial also to the same effect be addressed to the First Lord of the Treasury."

## INDIAN COMMITTEE.

The third conference on Indian subjects was held on Friday evening, the 16th inst., the Right Hon. Lord WILLIAM HAY in the Chair. The Paper read was—

## ON HILL SETTLEMENTS AND SANITARIA.

By HYDE CLARKE, Esq.

In calling the attention of those assembled at these Indian Conferences to the subject of hill settlements and sanatoria, I know that I speak in the presence of men well acquainted with its bearings, and better able to deal with it than myself. In this place, however, I have the plea that, eleven years ago (19th May, 1858), when these questions were quite new to the general public, I brought them before this Society, in a paper on "The English Settlements of the Hill Regions of India" (*Journal*, p. 423). I had also obtained their discussion before Parliament, through the late William Ewart, and by the Government of India.

At that period it was my good fortune to be the instrument of bringing to a state of practical advancement measures which, from time to time, have occupied the attention of the statesmen and friends of India. However chimerical it has been thought, and is still considered by some, to speak of the settlement of Englishmen in India, yet the question of the extension of English population there has, more or less, been considered and encouraged by Clive, Warren Hastings, Wellington, Munro, Bentinck, Auckland, Ellenborough, Dalhousie, and Canning. Indeed, many men have addressed themselves to the public with various propositions for its realisation, the more particularly by the extension of sanatoria in the hills, by the formation of military colonies, and by the development of hill resources. There may be named, Mr. Julius Jeffreys, Sir J. Ronald Martin, Dr. Archibald Campbell, Colonel Halsey, Sir James Login, Mr. J. Farley Leith, Mr. B. H. Hodgson, Dr. Hooker, General Tremeneheere, Mr. W. P. Andrew, Sir M. Stephenson, Professor Newman, Dr. Robert Barnes, General Sir Vincent Eyre, Capt. Nolan, and Dr. Mouatt.

Thus there is already a large body of co-operators; but there is, on the other hand, to be encountered listlessness and ignorance on the part of the general public, and misapprehension on the part of many men connected with India. We have been told for years that our propositions are chimerical and impracticable; that there is no land for wheat cultivation, or the maintenance of the population; and that we cannot constitute in the hill regions colonies consisting solely of English labourers, because natives are paid three or four annas a day for rough portage and unskilled work. There is so much truth in these objections that they would have great weight, were they really applicable to the practical results aimed at.

To discuss objections of this kind would take up much of our time, and with the less advantage, as, at this day, hill settlement has not only its beginnings but its progress; the experiment has succeeded, and the only real question now is, how best and how earliest to obtain all the benefits which are desirable.

India, for the purpose of our present inquiry, consists of two regions, the tropical and unhealthy plains, and the temperate and healthy hill regions, bordering on or intersecting the former. In the hills our civilians and soldiers can and do live as healthily and comfortably and work as well as in the plains. Setting aside for the time the consideration of the central and southern hill regions, the northern hill regions constitute a large territory, containing a large population, and capable of holding more. Cashmere and Nepaul are assuredly susceptible of maintaining large English populations, and may be conveniently referred to as examples, on a considerable scale, of what elements the hill regions are

composed. The smaller territories within our occupation, Sikhim or Darjeeling, the Dhoon, &c., have resources on a more limited scale, but that is no reason why we should neglect their development, or under-estimate the application of our general policy.

We have, indeed, to set aside our common conception of Dhurmsala or Nynee Tal. These are considered to be very small places, to which are sent small parties of decrepid English soldiers, for the recovery of their health. Most of them do recover their health, and then they are sent down to the plains to get ill again. Nynee Tal is therefore held to be a place of small consideration, and the hill sanatoria are of little and temporary value. We may, however, go a step further beyond this consideration. If the sanatoria can restore the health of the English soldiery and civilians, assuredly they are the places in which the health of healthy men can be maintained, as well as the health of unhealthy men. This is the principle for which we contend, that, so far as is practicable and convenient, the healthy English soldiery and civilians shall be sent to the hills and kept there, instead of in the plains. Thus we shall have a healthy legion, in full vigour of body and mind, ready to pour down on the plains.

If we spend in the hills any portion of the money we expend in the plains, then, instead of maintaining a host of native camp-followers of no political value to us, we shall maintain in the hills a body of English retainers, and of natives under English training. These people and their children will find other means of maintenance besides their participation in the public expenditure. They will engage in such culture of the soil as is practicable, in tea, cinchona, and vine planting, in the growth of orchard produce, in the development of the mineral wealth, and in various branches of industry. What is now being done on a very small scale by retired officers and soldiers, and yet to a practical extent, at Darjeeling and elsewhere, will be carried out so as, with English energy and enterprise, to be a means of subsistence for a large civil population. Then, below the cold hills are the tracts of the Terai, the Dhoon, &c., offering scope for European superintendence and enterprise. To the west are the passes into Tibet and Central Asia, through which, under careful management, a great trade can be conducted, and which will enrich our hill establishments by the interchange of the products of India with the table-land of Asia, and even of our own Darjeeling and hill teas.

Above all, there is the vast country of India itself; a field for enterprise open to the hill-men as to others, not for the mere shipment of produce, but for the development of indigo, sugar, cotton, and all the wealth of the peninsula. Assuredly the energy and enterprise of a healthy man, happy in his wife and family, surrounded by his countrymen and his home associations, will not be less effective than what is displayed by the isolated pioneer, who struggles to maintain health and comfort under unfavourable auspices. Assuredly the Englishman will do in India, under more propitious circumstances, what he has done in America, South Africa, and Australia. He will be able, likewise, to turn native labour to account, as in Natal and New Zealand.

In all fair considerations, as an industrial operation, the occupation of the hill regions by Englishmen augurs well, because they must largely profit by the wealth of the plains. There are, however, other considerations than those of pecuniary profit; there are higher and moral influences to be regarded. If we really wish to promote the real welfare of the native races of India, it can only be by the propagation of European knowledge and European morality, and for that we require a greater body of European labourers than we now possess; we require, too, that those European labourers we do possess shall be under healthier circumstances. He is but a poor missionary of civilisation whose wife is an invalid in England, and whose babes are in the

graveyard. There is, too, a less effective instrument of civilisation, the drunken railway workman, who remains a loafer in the land till cholera sweeps him off. How little can the City of Palaces be regarded as an English centre, may best be estimated by what it has really done within a century in the native population within its precincts.

With districts in the hills containing English cities, towns, villages, and homesteads, of which Simla, Darjeeling, and Hope Town, are the mere working models, we should possess permanent schools for the moral regeneration of India, to which the natives would resort, and which would act as a salutary corrective to the vernacular press.

Thus we have the means of advancing the moral and material welfare of our empire in India, and precisely as we avail ourselves of these, shall we succeed in securing the permanency of the benefits we confer on our subjects. There are two great dangers which menace India, and against which it is our duty to guard, for her benefit and our own. The first of these is internal mutiny and insurrection. To keep peace amongst these discordant races, we must maintain a large English army, and this is most effectually provided for in the hills. Generally speaking, the populations of the plains contain the least warlike races, and have the least requirement for garrisons. In the hills and neighbouring regions are the warlike populations, and it is not beyond our power to attack these populations of Tibetan or Dravidian origin, alien from the people of the plains, and more open to our action.

If the civilisation of India is in danger of being untimely strangled by its own distractions, it has a danger from without in the advance of that great enemy of freedom, the Russian empire. There are statesmen here who seek to look with complacency on the progress of Russia. It is the progress of trade and civilisation over the barbarism and anarchy of High Asia. Let it be so, that Russian trade will be increased. There is something more human than trade—there is the soul and mind of men. Under our empire the nationalities of India are being developed for their own advantage, and their many languages are each rapidly acquiring a copious literature, the living soul of the national thought. Under the Turkish empire, the Armenians, the Roumans, the Servians, and the Bulgarians, are constituting nationalities, and restoring or creating their several literatures. Under Russian rule this is altered; that not only does no such effort advance, but all are repressed; the languages of Poland and Lithuania are doomed, that of Finland discouraged, that of Georgia cannot expand.

To allow Russia to enter India in time of war, or even to menace it in time of peace, is not only to exchange English for Russian, and that is to do no good, but to undo all that we have done and are doing for India in the development of the seeds of freedom. This danger it is our duty to guard against, and the most effective barrier we can create is the promotion of our hill establishments, keeping there a really effective and undebilitated English force, and rendering that more available by a strong reserve of English, and of hill natives under English alliance. The hills are our great barrier against Russia, and the real bulwarks of India.

What has been done for hill settlement—with whatever complacency it may be regarded in India—is really very small. When we proved our case years ago, the Government of India promised us that one-fifth of the European troops should be placed in hill cantonments, but this has not been carried out, because the cantonments have not been provided, and are now in some cases being constructed. Thus the sanitarium have in ten years received a very slight extension and expansion. The measure of their favour is that about 2,000 invalids can yearly be sent up for the recovery of their health. The sanitarium and hill stations available for military and civilians may be briefly

grouped. For Bengal there are Darjeeling and Shillong; for Almorah, Nynsee Tal, &c.; for Dehra Dhoon, Landour, and Mussoorie; for the Simla district, Simla, Jutogh, Dugshaie, Subathoo, Chikrata, and Kussowlie; for the north-west, Murree, Dalhousie, and Dhurmsala; for Scinde, Ghizree; for Rajpootana, Mount Abos or Erinpore; for the south, Mahabuleswar and the Neilgherries, with Ootakmund, Koonoor, and Kotageri. Parisnath is now occupied, and Cherrapoonjee is abandoned as being too wet.

Nothing has been done for extending our hill territories beyond the extension of Darjeeling by the annexation of a small portion of Bhotan. It was long since recommended that Lahoul and Kangra should be occupied, and that some arrangement should be made for the transfer of Cashmere, so that it may be adopted as a European country.

Although the railway system has been extended, and affords better access to the mountain regions, the subject has been neglected, and systematic communication has not been supplied. It is only now that transit from Madras to the southern hills is provided. Darjeeling is still without a through railway, no progress having been made in ten years, although 200 miles alone are wanted to place it within a day's journey of Calcutta. Simla is unprovided. During all this time of delay and inaction, what are called mountain railways have been making progress in Europe and America. A comparatively limited series of lines would make the hill stations thoroughly effective and available. The money is not wanting, for Russia is now taking millions out of our market to make the railways, competing with and menacing India.

Another important subject in connection with the hills, is the promotion of military colonies, which has been so long discussed, and remains unaccomplished. It is difficult to enumerate all that has been written on this subject, and, doubtless, much will be said on this occasion. It will be sufficient to point to the valuable remarks in the recent paper by General Sir Vincent Eyre ("The Sikh and European Soldier," *Journal of the United Service Institution*, vol. xi., p. 102). See also my paper on the "Hills for Military Defence," in vol. iii., for 1859, p. 18, and my work on "Colonisation, Defence, and Railways in our Indian Empire," 1867.

A satisfactory step in advance has been the recent settling of English working parties at all the hill stations. It is, however, civil colonisation which is most energetic, and I have long considered that hill settlement, and the measures dependent on it, can only be efficiently promoted by the appointment of commissioners in India and at home, on a similar constitution to Land and Emigration Commissioners. It is chiefly by the subdivision of labour, by special organisation, that these important measures can be systematically practised.

The chief points to which attention has now been directed are, the adoption of the healthy regions of the hills for our chief military and civil establishments; their development and that of the table-lands of northern and southern India by English enterprise; the advancement of trade with Central Asia; the promotion of the material and moral welfare of India by the establishment of permanent centres of English population in temperate climates; and the preservation of these results by greater security against internal revolt and external aggression.

The leading measures by which this is to be accomplished, and which it is necessary for the Indian Government to carry out, are—

- 1st. The placing of the European troops, arsenals, and military establishments in the hills.
- 2nd. The immediate construction of cantonments.
- 3rd. The placing of the civil establishments in the hills.
- 4th. The completion of the railway connexion.
- 5th. The constitution of a land and emigration commission.
- 6th. The promotion of military colonisation.

In advocating these measures, we may feel a firm re-



liance that we are promoting the best interests of both England and India, that we shall establish a firmer and more cordial intercourse between the populations, and that we shall thereby advance the cause of civilisation and the welfare of mankind.

#### DISCUSSION.

The Hon. GEORGE CAMPBELL said he had listened with great interest to the paper read by Mr. Clarke, and would say at once he most thoroughly sympathised with the objects put before them, and admired the energetic way in which those objects had been described, although he could not agree with all the details that had been submitted. The title of the paper was "Hill Settlements and Sanitaria." He had some local knowledge, and would try to put before the meeting the true issue to be discussed, and in that sense they must draw a wide distinction between sanitaria and settlements. The former were places where European residents might have the opportunity of resorting, for temporary purposes, to recruit their health, whereas settlements were things of a more permanent character. There was a wide distinction, not only with regard to the objects of sanitaria and settlements, but also in the physical conditions in which one or the other could be obtained. With regard to sanitaria, he thought the government was hardly open to the censure which Mr. Clarke had so liberally bestowed upon it. With respect to civilians, he could assure them they were not really the ill-used beings which the author of the paper pictured them, but, from the Governor-General and the Lieutenant-Governors of the three Presidencies downwards, they showed ample capacity to take care of themselves, in respect of availing themselves of the benefits and advantages of temporary sojourns in the hill-countries. With reference to the military administration, too, he hardly thought Mr. Clarke had done justice to the government. He said the government had promised that one-fifth of the European soldiers in India should be settled in the hill climates. He (Mr. Campbell) was not clear, if the numbers were added up, there would not be found that one-fifth of the British troops were resident in the hill countries. He had occasionally resided in the hills, where three regiments were quartered in different places, and hill barracks were being added to very considerably; and he might say, wherever available localities were found, the government had not been backward in providing for the health of the troops. But, with respect to Mr. Clarke's observations, two things were to be borne in mind. He need not enter into the question whether the Russians came over the hills, and as to our placing troops on the hills by which they might come, it was out of our power to do so, inasmuch as we did not possess those hills, and they were inhabited by a warlike and independent race, and we could not take possession of those hills without coming into collision with them in a manner to which there were insuperable objections. Then, again, the most warlike of the people were in the plains, and it would not do to hide away the troops in the hills—they must have some in the plains and some in the hills; therefore he did not think in that respect the government of India had been seriously wanting. With reference to communications, his impression was, the government could not be blamed, because, however desirable it might be to help civilians and European subjects, there were great political considerations—military and commercial considerations—which must necessarily take the first place. Many great trunk lines had been carried out under the guarantee of the government. The Madras Railway ran to the foot of the Neilgherries. There was a gap in the communication with Darjeeling, but that was a place practically unimportant, and he thought they could hardly expect an expenditure of five millions to make a railway for the benefit of Calcutta, in respect of sanitaria in that district, unless there were prospects of its being

a successful line in a commercial point of view. Hence that line was, he thought, very properly placed in abeyance to the great commercial and military lines which had been already carried out. So much for sanitaria. Coming now to the question of European settlements and colonisation in India, he thought it one of the greatest objects, socially and politically; but they must bear in mind the practical difficulties which stood in the way of it. In the first place, those localities called sanitaria, were not fitted for settlement. There was, with small exception, an entire absence of those industrial pursuits in which settlers were, for the most part, employed. They did not want a European colony on the top of a hill, where there was nothing for them to do, but where it could be useful in developing the resources of the country. He need not say these conditions were not found on the tops of the hills. Even as a matter of health, he thought those stations at 7,000 feet elevation were not the best. They wanted to rear, not an exotic people, incapable of working in the plain, but a people fit to work their way in India. As to the sanitaria, they were fitted to restore health, but not for permanent residence. It was a known fact that many of the troops stationed on these high hills had suffered in health more than they did on the plains. The soldiers did not like them. It was more like being on ship-board; the hills were so precipitous, and the intervening spaces were so narrow, that the soldiers could not take much exercise, and they did not like it. Taking it altogether, he thought the lower elevations, where the cultivation of tea and the cinchona tree might be adopted as an industrial pursuit, would be more suitable to the purpose in view. Even as to the education of the children of the soldiers, great difficulties were experienced in respect of these elevated stations; and the Lawrence Asylum, which was stuck on the top of a hill, he was afraid was not very successful. It was also found that the children themselves were not very healthy, and there was no opportunity of bringing them up to useful trades and industrial pursuits. It was too much isolated, and great objection was taken to the site. The best situations he believed to be those at an elevation of 3,000 or 4,000 feet. Then they must look where such localities were to be found. Mr. Clarke talked of Cashmere as a place fitting for European colonisation; but Cashmere did not belong to us, and was not likely to. They had heard a great deal about the horrors of annexation. They were apt to run into extremes in Indian politics. So long as revenue was to be got, we annexed province after province. Having annexed those of pecuniary value, it would seem we were seized with qualms of conscience, and would not annex any more. Though the policy might be good in a revenue point of view, still, in a colonisation point of view there was a good deal that was unfortunate. We could not have the merit of that excellent conscience which demurred to annexation, and at the same time have the fruits of the country which might be annexed; because it happened that a large portion of country most fitted for European colonisation belonged to native chiefs, and the Maharajah of Cashmere, having a son of adoption, unless he rebelled our recent change of policy would render it impossible to acquire Cashmere, and, therefore, we could not hope for colonisation there. The same might be said of Mysore. There were several cities in the neighbourhood of Simla ripe for annexation. Now, from the change of public opinion, we had set up adopted sons of the present rulers there, and they were not to be annexed at all. We must, therefore, bear in mind that the districts of country suited for colonisation were unfortunately limited. There was Kangra, half of which was possessed by native chiefs. Again, there were the Simla hills, but with no considerable extent of country, and, in addition, Kumâon and Darjeeling, the latter being small in extent. But we must bear in mind these were very precipitous countries. The natives performed the little



labour that was carried on on the sides of the hill with difficulty. There was no great space available for Europeans under the circumstances. Then in Central India they had more land available than in all the other parts together, and there were tracts at a considerable elevation in which the climate was moderate and temperate; but it so happened that those districts were extremely unhealthy, and until they were cleared there could be no hope of European colonisation there. Then at the back of the Ghâts there was a tract of country where colonisation might be carried out, and also in the neighbourhood of the Neilgherries. We must not be too sanguine, but still there was a good deal of land available and we must obtain it, not in the extremely high country, but in districts where products might be grown—say at an elevation of 3,000 or 4,000 feet. The question was, what were we to do to promote colonisation, the object being most desirable. One of the grand difficulties was, how we were to acquire the land. There were rights of native chiefs to be regarded, but this he might say, as a view he had for some time entertained, that it was possible to encourage colonisation, and apportion to Europeans a part of the country where they might feel at home under their own laws and institutions, under a similar division of territory to that which the French had adopted in Algiers, which was, to form tracts for European colonisation as distinct from the great territory beyond. He did not advocate military administration, but it was competent to make distinctions between the territories; and in those regions capable of colonisation, we might draw a distinction between European character and native character. He believed in the lower hills we might have something in the nature of colonisation. We might pass measures to commute the rights of the chiefs, and provide land favourable for Europeans. Another point on which he agreed with Mr. Clarke was that military colonisation was most desirable to carry out. The principle to be adopted was that which was recently so ably advocated in this room by Mr. Cole, that we should not merely have soldiers paid all the year round as soldiers, but that, like the continental system, having passed through military training, they should subside into some useful life of activity. His own idea on the subject was, when soldiers had served a certain time, instead of sending them home with a small pension, it was good economy to offer them larger pensions to remain and settle in the country, and constitute a military colony, available for service in exigencies. They could be called up once a year, as our own militia was. Such a system would encourage men with knowledge of various handicrafts to remain in the country, and exercise their trades for the benefit of the colony. In that way we might do a good deal for the soldiers and for the security of the country. That idea had his most entire concurrence.

Mr. CHARLES HORNE said he had been requested to say a few words with regard to Kumâon, where he had resided for five or six years. He had seen a good deal that was going on in the way of colonisation. Many of the colonists were tea-planters; some were retired serjeants and other non-commissioned officers of the army, who had saved some money, and from superintending plantations came to be planters on their own account. He could say in every case within his knowledge, where they were steady, sober, and well-conducted men, they had succeeded. It would be a great difficulty in any place he had seen on the hills to settle a colony. In the first place, there was no space for any extended industrial occupations. He had seen only one instance in which there was space for one large farm; in others there was space for two or three small farms, a short distance from one another. These were scattered round villages where three or four tradesmen might settle, to supply the material wants of these scattered colonists. If this system were adopted by retired soldiers, and government gave them land, it would be highly desirable. The great difficulties in the matter were, in the first place,

the extreme isolation, and the difficulty of educating children. The complaint was that they must grow up like savages; there were no schools for the education of such children. Many of the planters took to growing vegetables and fruit, which they disposed of at the station. But there was one great difficulty which he was afraid would interfere with all colonisation in that part, that was the want of proper roads. Even the footpaths were such that it was with difficulty little ponies could be got along them, and the only means of transporting tea was on the backs of coolies or ponies. He had seen strings of ponies carrying three or four 11 lb. boxes of tea each. The district itself was easy of approach, and he had been informed that the Government had sanctioned the construction of a light line of railway in connection with the East Indian Railway. The Kumâon Iron Company, in which he was interested, broke down some years ago from the want of such railway communication. One of the great difficulties with regard to the hills was the great expense of getting anything to eat, not to say luxuries, but such things as flour, and the simplest necessities of life. The expense of keeping troops under such circumstances was very great. The men required their rum and beer, and other things, the same as if they were in any other quarters. As to cantonments, when he was there last year they were going on rapidly with the construction of barracks for 1,000 men a few miles from Nynsee Tal. It was a hog-backed mountain, so level on the top that one might drive in a carriage, where the roads were made from three to five miles on a level, which was a great thing to say. As the crow flies, the distance to the foot of the hills was not more than ten or twelve miles, but, as the roads were being made, the distance would be forty or fifty miles to come out on the plains of Ramnuggur. In this way another thousand men would be disposed of to Mr. Clarke's satisfaction. There were other localities which might be mentioned as suitable for the objects in view, one of which was Ghorka, where a military station was provided for native troops. That was a place where a colony might be settled, and consisted of a large level basin enclosed by hills, while Nynsee Tal was a hollow formed in the hills from the falling in of masses of rocks, &c., extending about one mile in length, by half a mile wide, and was 6,500 feet above the level of the sea. That was of course a very limited valley, but over the whole of the Kumâon district, there were spots favourable for settlement. The formation of these settlements would enable them to understand the tenure of the land—what belonged to one village and what to another. At the present time a man might go to the top of a hill and pointing to the opposite hill, say, "That is my estate." It was not clear where the estates did end. The unfortunate planter settled down and planted his tea on the land obtained from the zemindars, and immediately his land was overrun by hordes of natives. He might be told he must fence in his land, but fancy the difficulty of fencing in an estate on the hill side! The roads were pretty good in that province, particularly that made by Colonel Ramsey into Tartary; but it was like making a road to an impassable ditch, inasmuch as nobody could pass through the tribes of Tartary. There was a curious fact connected with that part of the country. At the time he first went to India, Almorah was the great emporium for borax brought from Thibet. It was the great mart for that article, but the road we had made along the valley had had the effect of diverting that trade almost entirely to Ramnuggur. Mr. Campbell had spoken of the wealthiness of the large tracts of land of the Central Provinces. In 1844, he (Mr. Horne) was engaged in carrying out the canal from Shahpoor in connection with the irrigation of Terai, and such had been the effect of that upon the climate that last July he saw people coming from the hills to the plain. The climate had been so ameliorated by the clearing of the land, that people preferred to reside all the year

through at Terai rather than repair to the hills during the hot season.

SIR VINCENT EYRE regretted that he arrived too late to hear the whole of Mr. Clarke's paper, but he perceived that gentleman had made mention of his humble efforts in the direction of military colonisation when he was in India, a subject on which he then and still took a great interest. He agreed with Mr. Campbell that, if colonisation was to succeed in India, it must be military colonisation, because it would be under more perfect control than any other. He had always regarded it as a great mistake that we should not long since have turned our old soldiers to some such excellent account, instead of allowing them to come home to be half starved on small pensions. They would be more happy and more useful as colonists. He had been much struck with regard to Russian progress in India, by the fact that every step of that progress had been marked by the founding of colonies; and he had no doubt that was the only true method of procedure, to advance step by step, and take root as they went along through the wild countries they had had to overcome. With regard to our own position in India, we certainly had a very fine army there, both in the hills and on the plains, but we knew in troublesome times we had to leave large tracts of country almost undefended; and, during the troubles of 1857, it was remarkable how successful small bodies, even of railway engineers, were, located together, in keeping the peace round their own districts, and even aiding in military operations. Hence he was very glad to see Mr. Hyde Clarke make this move with regard to so important a subject, and he hoped it would not be allowed to drop. He thought it would be easy to establish a beginning of military colonisation. He believed in every regiment which remained in India for any time there would be found candidates perfectly qualified and delighted to join in any well-organised attempt of this kind. He knew attempts had been made on a small scale, without proper organisation, and from those no proper idea could be formed of the success of such an undertaking. He believed if in every regiment located in India there was founded a colonisation fund, to which the soldiers might subscribe from the time of their first enlistment, so that, at the end of their period of service, they should have amassed a certain sum with which to set up in life, with the aid of their pension, and such other assistance as the government might be disposed to grant, they might get on extremely well. It would be necessary to select only men of good character. Those of intemperate habits would be worse than useless; but we had an ample supply of good steady soldiers, with wives and children, whom it would be most beneficial to themselves and to the government to organise as military colonists in such places as the Neilgherries and Darjeeling, where they might employ themselves in the cultivation of such products as tea, coffee, and the cinchona plant. It was part of his own experience in India to found a colony himself, but it did not consist of Europeans; they were half-caste natives, descended from the old Portuguese settlers. When he received an appointment at Gwalior, he found a great number of these men turned adrift, on the disbanding of the Mahratta army. They were going about in great distress, and many of them had families. They were all Roman Catholics. He was visited by their priest, a Franciscan friar, who was delighted to find some one who took an interest in his flock, and confirmed all he had heard with regard to the distress of those people. There were between 200 and 300 families. He made an appeal to the public on their behalf, and was able to raise nearly £1,000. His first idea was to settle them in the Gwalior territory, but the Maharajah was opposed to it. He found there was available land in Dhera Dhoon, and there he purchased some excellent land. He first of all sent three or four of them to judge for themselves; they went 300 miles up the country, and came back perfectly delighted with the prospect before them. Not one of these men had ever been employed in husbandry

work. They were chiefly drummers and fifers, serjeants, and some native officers. The little band, headed by their Franciscan friar, started in procession for their new quarters, and were favourably received by the superintendent of Dhera Dhoon. On reaching their settlement they immediately commenced building habitations and laying out gardens. They also built a church and school, and for three years that colony went on well. At the end of that time, thinking that, in case of his death, they might come into trouble, he made over the land to the Roman Catholic archbishop, and washed his hands of the thing, but continued to take an interest in it. The experiment would have gone on well, so far as the people themselves were concerned, for they bred fowls and goats, and cultivated sugar cane and other things, as well as vegetables for the market; but the climate proved unfavourable—less favourable than he was led to expect. For two successive years they lost their cattle from murrain, and the people were smitten with fever. They gradually emigrated up to the mountains, and the land was disposed of to good account, and was now occupied as a large tea garden, under European planters. If such men as those could succeed, he did not see why Europeans with greater physical powers and higher class of character, should not also succeed.

MR. EDWIN CHADWICK, C.B., said—I beg to submit for consideration one set of means necessary to getting settlement and succession by Anglo-Saxons in India, namely, by practical applications of sanitary science and art, which shall make it habitable for children. It is asserted by many as a dogma, which is widely prevalent (and it is very generally tacitly assumed by civil officers of India), that the children of English parents, as they do not, so they cannot, thrive there, but die out, and that there can be no British succession. It thence follows, according to this doctrine, that all there is to do, at least for civil servants and men in office, is to get as much money as they can—get as long furloughs as they can, and leave India as quickly as they can—leaving the lower sort of people, who know no better, to stay and die out. The truth of this dogma is the primary question to be determined, for it determines the question of settlement and our policy in relation to India. Now, my own sanitary researches would enable me to point out conditions of urban districts at home of which the same dogma may be predicated—conditions in which there is now no succession. Here in London, there in Liverpool, in Manchester, and in Glasgow, there are districts inhabited chiefly by immigrants from the rural districts, who become sickly and squalid, have their period of working ability considerably diminished, and of whose children more than half are in their graves before their fifth year, and those who survive are stunted and puny, and the successors rapidly die out. I directed particular inquiries on this point in some old and low districts in the metropolis, and it was reported to me that there really was no succession, and that the population was an immigrant one, there being very few who had been born there. My sanitary service rendered it necessary that, on the advent of the cholera in 1847, I should inquire as to its sources in India. I had, with my colleagues, to take measures to meet the epidemic visitation in the West Indies. For these purposes I carefully consulted returned medical officers—who, in India or in the tropics, had served in the most severe attacks of epidemics—as to the conditions in which those epidemics arose and were propagated, and especially as to infantile mortalities. From all I could learn, it was clear to me that the European of good condition can stand simple heat—the heat of pure air, uncontaminated by any aerial poison. Excessive heat certainly reduces strength somewhat, and diminishes the restorative effects of sleep, but does not, that I could learn, of itself induce disease, though, of course, it increases the susceptibility to malaria, or to passing causes of disease. The main causes, however, of excessive in-

fantile mortality in India, into which I have specially inquired, are everywhere gross, and such as occasion sickness and more or less of infantile mortality here, and are such as we know to be, in a great degree, and often entirely, preventible by sanitary means; and when by proper sanitary measures—which have yet to be made prevalent in India—you prevent them, you may have succession and permanent settlement. In the West Indies also, it is a dogma that pure white people cannot work there, or rear children, or have succession, yet I met with an instance of a settlement, in one parish, of Germans, who had cleared a wood, had performed labour such as it is declared that no whites and only the negroes can perform, and these produced sugar, and had children, and, being of temperate habits, are now in a third generation and advancing to a fourth, refuting the superficial dogma, and proving the possibility of succession. In India the death-rate in our army has averaged upwards of sixty in a thousand, and, if it had gone on at that rate, it would have been difficult to maintain an army there. In answer to the revelations of our Sanitary Commission for the Indian army, this rate was attempted to be denied by the Indian Government, and it was represented that they had not been neglectful of the physical well-being of the army, but had improved it; and, taking one exceptional year, it was made out that the death-rate was not above twenty in a thousand. The Sanitary Commission gave a remarkably complete and decisive answer to this discreditably misrepresentation, which ought to have been visited with serious official censure. But the death-rate is now, I believe, by measures which ought to have been taken long before, brought down to about twenty in a thousand. I observed it stated in the French army medical statistics that the death-rate in their army in Algeria had been reduced to twelve in a thousand—that of our Guards in London having been 20. I thought it my duty to bring this fact of the results of the application of sanitary science in Algeria under the notice of the Sanitary Department of the War Office. At first it was disbelieved, for the death rate in Algeria had been seventy, eighty, and even as much as a hundred in a thousand, and the ravages amongst the first colonists even proportionate, and settlement, by the French race, pronounced dogmatically to be as impracticable in Algeria as certain official men lazily allege it to be in India. But Earl de Grey was good enough to appoint a committee to visit Algeria, and, with the assent of the French Government, to examine into these most important facts for India. This committee included Dr. Sutherland of the Army and the Indian Sanitary Committee, Dr. Logan, the present chief of the Army Medical Department, with Colonel Ewart, of the Engineers, who had served in India, and Mr. Robert Ellis, C.B., secretary of the Sanitary Commission of India, now secretary of the Madras Presidency, one of the ablest of the able administrators that India has produced, and who himself has, on two great occasions, by his measures, warded off severe visitations of cholera. This committee, after a full examination, verified the French army medical statistics, and the fact of the sanitary achievement of reducing the death-rate of the army, and maintaining its strength; and, more than that, they found example-districts where three bodies of troops had been decimated and three sets of colonists had been cleared away; where, by the sanitary improvement of the habitations for the settlers, as well as of the barracks, by bringing in fresh water, and by proper house and court drainage works, carrying away the foul water and excreta, and, apparently, more especially by carefully opening up the adjacent lands by culture, at proper times, and in proper modes, so as to avoid the fevers common to that process in such climates, by clearing away redundant timber, and by a high and complete culture, they succeeded in subduing malaria, whilst they raised produce, and reduced the excessive sickness and the death rates. Previously, the infantile death-rates had exceeded the

birth-rates; a condition in which, of course, settlement and succession was impossible. But now in these spots the birth-rate exceeds the death-rate, and they found that upon those former seats of deadly pestilence—now of good agricultural production—crops also of strong healthy children, as strong as any in the agricultural districts of France, are raised and flourish. The able Indian commissioners agreed that these great examples were applicable to India, and they have yet, by honest competent government, to be made known there—and by officers competent in sanitary science to be made prevalent there. But not a single model town or district for the civil population has yet been produced or attempted there, as far as I can learn. The first thing for settlement, be it borne in mind, is to provide assured sanitary means and care of the living of the children of settlers. The only means that appear to be thought of are the hill sanatoria. It appears to be considered that, as you rise in height, you rise above the sources of disease; of some diseases, from bad sanitary conditions in the plains, you do, but you enter into others of bad sanitary conditions also. As you leave a hot for a cold climate, you by no means ascend into the perfect salubrity assumed, for such changes are too frequently only changes of the forms of disease; a change of the diseases of a hot for the diseases of a cold climate—if the hills be not, under competent sanitary science, put in befitting sanitary conditions. I beg to present some examples of the conditions of the so-called hill sanatoria. I cite the report of the Indian Sanitary Commission, from Indian official evidence on this most important point. They state generally as respects the hill stations:—"The stations being generally on ridges and near ravines, afford great facilities for perpetrating all kinds of nuisance. There is a large native population, over whom very little sanitary inspection is exercised. At Simla, the 'conservancy' is described as being as bad as it could be, the ravines full of dead animals, together with the ordure of many thousand natives. There are no public conveniences. The water supply was scanty, and liable to pollution. The effluvia from the ravines were 'as strong as on going into a sewer.' A large amount of hill diarrhoea prevailed among the residents, which Surgeon-Major Grant attributed mainly to want of sanitary precautions, and neither to the elevation nor to the damp atmosphere. He states that the disease had gradually increased with the increase of population, and that 'the authorities seemed to think that, because the climate was cold, the men might be crowded together, and all sanitary arrangements neglected with impunity.' The men were crowded together at Kussowlie with fatal results. Colonel Greathed informs us that, when the rains begin, the nuisance produced by the washing down of the filth is intolerable. The reports on the stations give the evidence of a number of officers on this same subject. We learn from them that the barracks at several stations in the Simla group, such as Subathoo and Kussowlie, are bad in structure and plan; that at Mount Aboo the barracks are erected in a malarious gully; that at Nynsee Tâl, 7,600 feet above the sea, the huts have been built in a narrow defile, where the earth is damp, and a perfect marsh during rains, and where the huts are exposed to violent gusts of wind. The bazaars are filthy and crowded. There are neither drains nor latrines, and 'the stench is at times overpowering,' causing nuisance in the barracks. At Darjeeling the medical officer reports the sanitary condition of the hospital for convalescents as 'bad,' and he states that he had been making representations for five years as to a privy under a verandah connected with the hospital, before he could get the nuisance abated, which rendered the ward so offensive that the sick had to be removed out of it. The drainage is defective, and 'the inducements for the sick to remain dirty are,' he thinks, 'greater than those to be clean.' The hill stations on the Neilgherries are not exposed to the same objection

as regards climate; the rain-fall is much less, and the air is drier; there are fewer fogs, and altogether this group of stations is perhaps the best yet occupied. But even here the usual fatality followed neglect of very obvious sanitary measures. When the station at Jackatalla, now called Wellington, was first occupied, much disappointment was experienced on account of the high rate of sickness and mortality. The mortality of the 74th Highlanders, during three years at Jackatalla, was at the rate of 39 per 1,000. Of the 68 deaths in the regiment, 19 deaths were by dysentery, 6 by diarrhoea, 8 by cholera, 6 by apoplexy, 9 by hepatitis. The barrack square 'was frequently an immense swamp.' In 1860 the mortality of the 60th Rifles, third battalion, was at the rate of 24 in 1,000 at Jackatalla; the mortality of the 66th Foot at Cannanore was 11 in 1,000 during the same year. Cannanore is on the coast, and 20 feet above the sea level. On inquiry into the causes of this sickness, it was discovered that, besides want of attention to drainage, the large body of from 2,000 to 3,000 workmen employed on the buildings had been under no sanitary control, so that the ground for miles about was 'one immense privy,' and the troops suffered to a great extent from bowel disease in consequence; but since sanitary arrangements were thoroughly carried out, the sickness has been under one per cent. of the strength. One thing is quite clear, that it will never do to trust simply to elevation above the plains to keep the army in health. Malaria has been blown up ravines in India far above the fever range, over sites otherwise perfectly healthy; and those who slept within its influence have been attacked with fever and died. We have shown that epidemic disease originates at hill stations just as it would do at unhealthy stations at home. Hence, in selecting sites on hills, all the precautions necessary for selecting sites on plains are just as necessary. 'The climate, exposure, sub-soils, drainage, water-supply, local diseases, and the relation to distant sources of malaria, require careful examination; and all buildings, whether for European troops or natives, must be subjected to the sanitary conditions as to structure and supervision which are everywhere required.' Now, this is a mild statement—an epitome of much of the civil government of India. To one conversant with sanitary science, it is only necessary to know of such death-rates, and to know of such cases of death by dysentery, diarrhoea, and epidemic cholera, to be certain of the existence of such local causes or antecedents as those above described. And if they mow down strong men, what chance have women and children against them? What chances are there of succession under such neglect? Mr. Campbell states that civilians in India know how to take care of themselves. This may be questioned, from the extent of their invaliding, and their squalid appearance here. But, most certainly, they as yet have a miserably small knowledge of how to take sanitary care of the people they are appointed to govern. It may be said that better care has been taken of these matters since the returns I have cited were made. But here is the fact, that cholera and preventible disease are yet rife in the hill sanitariums—the places of refuge. In 1867, Murree (which is 7,800 feet above the sea), Sabathoo, Dhurmsala, and Kassowlie, were all ravaged by cholera. Ottacamund, a place of a particularly fine climate, 6,000 feet above the sea, vaunted as a sanitarium—and justly so, probably, if there were any proper sanitary care of it—has recently been infested with typhoid fevers, and has gone on from bad to worse, and is now reported to be in so bad a condition, with all its elevation and climate, as to make it dangerous for invalids to resort to it at all. Here is a pretty state of civil care and local government! It is characteristic of it, that objections are made to sanitary service and works on the score of expense, which, if the works be properly prepared, is an ignorant objection to the means of staying waste—pecuniary waste—objection to the means of the largest economy. Sanitary works, like other things, are to be tested by the results—the saving

of sickness and the prevention of premature mortality. In India, I find works condemned for their inutility here reproduced there—enormous expenditure for large main-sized sewers, which detain what sewers properly adjusted should remove—sewers made without due and complete connection with houses; water carried into town districts without due means of removing the foul water, and thus aggravating bad subsoil drainage and creating swamps; water for the supply of town populations, gathered into open reservoirs, so as to engender dangerous impurities; foul surfaces attempted to be corrected by latrines which, not having due provision of water for constant cleansing, were concentrated poison pits for all those who used them—large works, by per-centage-fed civil engineers, who profited by the extravagant cost of works, irrespective of results. All this in defiance of exposures at home, and of principles and works proved by long trial, and the reduction of death-rates. There must be better government than this in India, or children cannot be raised there, and there can be no succession and no settlement. And certainly the recent great lesson gathered in Algeria must be made known and made prevalent, for it does not suffice, even for the protection and maintenance of our military force, to put camps and cantonments in a good sanitary condition, without putting also the surrounding land, the adjacent towns and civil populations, in the like condition for rearing children, and keeping settlers for cultivation.

Mr. TURNBULL remarked that Mr. Campbell had drawn a distinction between the character of the hill people and those inhabiting the plains. His own experience had been with the latter; and if Mr. Hyde Clarke meant to set up a large tract of land in Bengal, and place there as many Europeans as could live on it, under habits and institutions of their own, he could understand it; but unless he was going to fence them round, it was one of the most dangerous things he ever heard of. To introduce thousands of Europeans into the middle of Bengal in that way would be frightful. He knew what Europeans could do perfectly well. The regulations of Bengal, so far as the English were concerned, were right and just, and they must have some code of regulations, but they would be inapplicable to the native character. It would be like using a net in the Ganges with meshes large enough to let every fish go through. They would be obliged to take care of themselves in the best way they could. With regard to what Mr. Chadwick had said as to sanitary conditions in India, he agreed with every word. He knew many of the stations, and had been in some. In Bengal he never strolled outside one of the stations without seeing exactly what Mr. Chadwick had described. It was the same in Calcutta. The moment one got beyond the fine houses of the Europeans, they found the same state of things, indescribable by Englishmen. He had been told by artillery officers that their station was under water for a great part of the time. The higher ranks of civilians might avail themselves of the sanitarium, but there were a great many who could not. He knew habitations in which four or five families lived, amounting to 30 or 40 persons. That locality was visited by cholera, and it carried off sometimes over 20 people in one house. There was no necessity for the people to live in that way, and he thought some efforts ought to be made in that direction. He had been struck, on going to Calcutta, with the appearance of the Europeans living there; he presumed it was from the general unhealthiness of the place.

Mr. EDWIN CHADWICK said, as a general rule, one might test the nature of the civil administration in going through a town by the nose.

The Hon. GEORGE CAMPBELL wished to explain, with regard to the sanitary question, that he was not altogether a believer in the sanitary science of the present day. He thought they were groping their way. He denied that sanitary science alone could put a stop to cholera and fever; but, whether sanitary science were

good or bad, we were overrun with it, and parties ran wild on sanitation. He thought Mr. Chadwick had put Algiers in a more favourable light, and British India in a less favourable light than it deserved.

Colonel HAYLEY moved the adjournment of the discussion to Friday evening, 23rd instant, which was agreed to.

#### CANTOR LECTURES.

The second lecture of the course "On Applied Mechanics," was delivered by John Anderson, Esq., C.E., Superintendent of Machinery to the War Department, on Monday evening, the 19th inst., the subject being "Applied Mechanics in relation to Natural Properties of Materials." John Hick, Esq., M.P., occupied the chair.

This course of lectures will be published in the *Journal* during the vacation.

#### NINETEENTH ORDINARY MEETING.

Wednesday, April 21st, 1869; EDWIN CHADWICK, Esq., C.B., Member of Council, in the chair.

The following candidates were proposed for election as members of the Society:—

Addison, Colonel, 23, Argyll-street, W.  
Ansten, Frederick G., 32, Alpha-road, N.W.  
Bayley, Charles John, C.B., 51, Victoria-road, Kensington, W.  
Blakley, Alexander, 6, Courtland-ter., Kensington, W.  
Bodmer, Louis Rudolph, 2, Lansdowne-road, Notting-hill, W.  
Braid, Charles, 13, Westbourne-park-road, W.  
Brandon, Thomas Cooke, 22, The Grove, Boltons, S.W.  
Burstow, Charles, Saville-house, Lorrimore-square, S.E.  
Bycott, Thomas, 7, Gloucester-place, Portman-square, W.  
Calvo, Nicholas Antonio, 8, Devonport-street, Hyde-park, W.  
De Marcourt, Arturo, Langham-hotel, W.  
Earnshaw, Edwin, 17, Fenchurch-street, E.C.  
Gregson, Matthew, Liverpool.  
Lock, Frederick, Epsom.  
Pitcairn, Robert, 2, Old-square, W.C.  
Thomson, E. H., 12, Buckingham-street, Strand, W.C.  
Watt, Robert, Ashley-avenue, Belfast.  
Wimshurst, Henry William, 22, Great St. Helen's, E.C.

The following candidates were balloted for, and duly elected members of the Society:—

Alex, Ephraim, 5, Brook-street, Grosvenor-square, W.  
Altmann, Henry J., 16, Caroline-street, Bedford-square, W.C.  
Anderson, Francis, M.D., 47, Arundel-gardens, Kensington-park, W.  
Armstead, H. H., Bridge-house, Eccleston-bridge, S.W.  
Barlow, W. H., High Combe, Old Charlton.  
Bath, Edward, Law Clerk's Office, Waterloo-bridge Station, S.E.  
Bedford, Edwin, 5, Royal-crescent, Notting-hill, W.  
Bell, George S., 110, Great Russell-street, W.C.  
Benson, William, 147, Albany-street, N.W.  
Brooke, George, 72, Myddelton-square, E.C.  
Brooks, James, 11, Serle-street, W.C.  
Berry, Thomas, 1, Halkin-street, Hyde-park-corner, S.W.  
D'Orsey, Rev. Alexander J. D., 13, Prince's-square, W.  
Hichens, Captain William, Royal Engineers.  
Norton, Thomas Sterry, Lestell, Sydenham-rise, Forest-hill, S.E.  
Thorne, Eliseus, The Thorns, Worcester-park, near Kingston-on-Thames.  
Wigan, Frederick, Clare-lawn, East-sheen, S.W.

The Paper read was—

#### ON TRADE MARKS.

By W. WYBROW ROBERTSON, Esq.

I find, on referring back so far as to the evening of Tuesday, the 23rd of March, 1762, that the ladies and gentlemen of London were informed at their tea-table, by means of the then fashionable journal of the day, the *St. James's Chronicle*, of the following fact:—

#### POSTSCRIPT.

##### INTELLIGENCE EXTRAORDINARY.

STRAND.—The Society of Arts, Manufactures, and Commerce are preparing for the annual Exhibition of Polite Arts, hoping by degrees to render this nation as eminent in taste as war; and that by bestowing premiums, and encouraging a generous emulation among the artists, the productions of paintings, sculpture, &c., may no longer be considered as exotics, but naturally flourish in the soil of Great Britain.

Immediately under this notice there followed another, which, even in this assembly, I must admit was in the nature somewhat of a squib on the Society:—

GRAND EXHIBITION.—The Society of Sign Painters are also preparing a most magnificent collection of portraits, landscapes, fancy pieces, flower pieces, history pieces, night pieces, sea pieces, sculpture pieces, &c., designed by the ablest masters, and executed by the best hands in these kingdoms, &c.

But a little while after, this exhibition was opened in Bow-street—the hours, nine till four; admission, one shilling—and a perfect storm of controversy arose in the journals of the day. The then, as I trust now, worthy members of the Society of Arts were terribly ruffled, and persisted in seeing in it a *persiflage* of their exhibition just then opened. To this animosity, however, we owe a record of the signs then exhibited; and Bonnell Thornton's Exhibition of Sign-boards became famous in its way. I have touched on this point, for to sign-boards we can trace the origin of trade marks, the affinity between them being very strongly marked.

Taking a retrospective glance, we find that the Egyptians, without doubt, displayed inscriptions denoting their trade, with the emblem which indicated it. The Greeks also used signs. Athenæus says, "*αὐτὸν Προτεροῖς θηκη διδασκαλίην*;" he hung the well-known sign in front of his house. Amongst the ruins of Herculaneum and Pompeii, many Roman signs have been found let into the pilasters at the side of the open shop, as a goat, by a dairy; a mule driving a mill, at the bakers; whilst at the door of the schoolmaster was the not over tempting allurements to knowledge of a boy receiving a good birching. Doubtless, in this country, our ancestors adopted the sign-board from the Romans. At first an object typical of the trade was used, but as the number of traders dealing in like wares multiplied, something more was needed. The desideratum was to give to the shop a name or token by which it might be known, and customers sent to it, and rival tradesmen tried to outvie each other in the magnificence and size of the particular mark or sign denoting their business. These signs were looked upon as heirlooms, and descended from generation to generation, like the coat-of-arms of the nobility. The booksellers, for instance, had a wood-cut of their signs for the colophon of their books, and this was the case with the "Brazen Serpent," the sign of Reynold Wolfe. His trade was continued a good while after his demise by his wife Joan, who made her will on the 1st of July, 1574, whereby she desired to be buried near her husband, in St. Faith's Church, and bequeathed to her son, Robert Wolfe, the Chapel-house (his printing-office), the "Brazen Serpent," and all the prints, letters, furniture, &c.

Whilst at as early a date as that of Benedict Hector, one of the early Bolognese printers, complaints of piracy are recorded—in his "*Justinus et Florus*" he thus writes:—"Purchaser, be aware, when you wish to buy books issued from my printing-office; look at my sign, which is represented on the title-page, and you can never be mistaken; for some evil-disposed printers have affixed my name to their uncorrected and faulty

works, in order to secure a better sale for them"—so, also, we find a like complaint in the preface to Alder's "Livy," 1518:—"Lastly, I must draw the attention of the student to the fact that some Florentine printers, seeing that they could not equal our diligence in correcting and printing, have resorted to their usual artifices. To Alder's 'Institutiones Grammaticae,' printed in their offices, they have affixed our well-known sign of the 'Dolphin wound round the Anchor.' But they have so managed, that any person who is in the least acquainted with the books of our production, cannot fail to observe that this is an impudent fraud. For the head of the dolphin is turned to the left, whereas that of ours is well known to be turned to the right."

At a time when few could read or write, sign-boards were indispensable to the trader, and even as late as 1802-3, C. A. G. Goede, in his "Memorials of Nature and Art, on a Journey in Great Britain," writes—"As it is one of the principal secrets of the trade to attract the attention of that tide of people which is constantly ebbing and flowing in the streets, great pains are taken with the signs and devices that are hanging before the shops, and, as soon as a shop has acquired some degree of reputation, the younger brethren of the trade copy its device. A grocer in the city, who had a large beehive for his sign, had allured a great many customers; no sooner did the people swarm about this hive, than at other shops the old signs disappeared and beehives elegantly gilt were substituted. Hence the grocer was obliged to insert an advertisement in the newspapers, importing that he was the sole proprietor of the original and celebrated beehive. A similar accident befell the shop of one E——, in Cheapside, who had a considerable demand for his goods on account of their cheapness and excellence. The sign of this gentleman consisted of a prodigious grasshopper, and as the insect was quickly propagated throughout the City, Mr. E——, in his advertisements repeatedly requested the public to observe 'that the genuine grasshopper is only to be found at his warehouse.' He was, however, enabled to persuade several young beginners to enter into engagements with him on advantageous conditions, by which they obtained a licence for hanging out the sign of a grasshopper before their shops, expressly adding this clause in large capitals, that 'they are genuine descendants of the renowned and matchless grasshopper of Mr. E——, in Cheapside.'" But these were rather isolated instances, for as education spread abroad, so had sign-boards fallen into disuse, and when the system of naming each thoroughfare and numbering each house came into use, the chief value of the sign-board was gone, and they lingered on, rather as instances of decorative fancy or as advertisements of established reputation and business success.

I will not trespass longer on signs or their history. They call up many a picture of the olden time, many a trait of bye-gone manners and customs, old shops, old residents, and many an hour might be whiled away in pondering over the ancient tenements known by their signs, the tavern, with its noisy company, the coffee-house, with its politicians and beaux, the mercer's, crowded with many a dame and admiring fop, or the bookseller's, filled with the monuments of departed minds.

The sign-board has served its purpose and died away, but from it we can trace the origin of trade marks. The merchant or manufacturer who had placed his sign before his shop had, in the seventeenth century, transferred the same to his trade tokens, or brass farthings, which were issued stamped with the sign of the shop and the name of its owner, whilst, from a still earlier date, as we have seen, printers had used a woodcut of their signs for the colophon of their books. So, in time, other manufacturers came to stamp or mark the goods they sold, either with their name and address or with some peculiar mark or device, for having acquired some reputation in the trade and with the public generally, the manufacturer sought to protect his good name therein by

affixing some mark or brand by which his goods might specially be known. As this custom became more general in trade, as gradually well-known marked and branded goods came into demand, so also did a system of piracy spring up amongst a set of unprincipled traders, destroying the fruits of honest industry, intelligence, and skill. Not only was the merchant's trade injured, but the character and reputation of his manufacture was impaired, if not destroyed. The home trade, without question, suffers extensively from this fraud, and the British manufacturer is seriously injured by it in his colonial and foreign intercourse. There is scarcely a single article of British manufacture that is not now fraudulently imitated in France or Germany, and thence spread over the rest of the Continent. The spurious goods thus manufactured are exported also in large quantities into British as well as foreign dependencies, whilst the greater part of the merchandise passing for English manufacture in the East and China, has no claim whatsoever to that character.

I have already noted how, as early as 1518, the printer had complained of his trade-mark being imitated, and we know that in the time of Elizabeth an action on a case for a deceit was held to be against a clothier, who put on his inferior cloths the trade-mark of a clothier who made superior cloths. The first reported case on the subject at law was in 1783, before Lord Mansfield, who said that the plaintiff had no property in the name of his medicine (Dr. Johnson's Yellow Ointment), yet, if the defendant had sold medicine of his own under plaintiff's name or mark, that would be a fraud, for which an action would lie. The remedy at law was firmly established by this decision, and in the next reported case, in 1824, *Sykes v. Sykes*, the principle was admitted, for the case was defended on the ground that the defendant had no intention to defraud. This principle has been further developed and confirmed in *Blofield v. Payne*, 1833; *Morison v. Salmon*, 1841; *Crawshay v. Thompson*, 1845; *Rodgers v. Nowill*, 1847; and now under the Merchandise Marks Act of 1862, the Court of Common Law can grant an injunction to restrain the use of a trade-mark. In the Court of Chancery the remedy for infringement of trade-marks was accorded later than in the courts of law. In 1742, Lord Hardwicke, refused to restrain a defendant from imitating the plaintiff's mark on cards. In 1803, Lord Eldon granted an injunction against a printer who had published a magazine which was an imitation of, and had been sold as and for the magazine of another proprietor, but he directed the plaintiff to bring an action, to try his right at law. This case appears to have rested solely on misrepresentation, and not on any right of the plaintiff to the title-page of his magazine as a trade-mark. It was not till 1833 that a case of restraining a trade-mark was decided in the Court of Chancery; and this case was followed by many others, in some of which the plaintiff was successful, in some not. In the decisions on these cases great discrepancy existed, for where in some cases the plaintiff's relief in Chancery was made to depend on his success at an action at law, of which intentional fraud is the essence, in other cases it was decided that intentional deceit was not necessary to ground an injunction.

Thus for many years the law relating to trade marks was in a very unsatisfactory state, but, in 1862, owing to the exertions of Mr. Travers Smith, Mr. Poland, Mr. Underdown, and the assistance afforded them by Mr. Roebuck, Mr. Milner Gibson, Mr. Hadfield, Mr. Bass, and others in the House of Commons, the Merchandise Marks Act of 1862, entitled, "An Act to Amend the Law relating to the Fraudulent Marking of Merchandise," drawn by Mr. Hindmarch, was passed.

This Act has much remedied the evils, and simplified the whole matter, by making it a misdemeanour to forge or counterfeit any trade mark. It is now an offence to sell or expose articles with forged or false trade marks, under a penalty of a sum equal to the value of such



articles, and a sum besides not exceeding £5 or less than 10s. Every addition to or alteration and imitation of, any trade mark made with intent to defraud, is to be deemed a forgery, and punished as such. It is further made obligatory on every person who shall sell an article having a false trade mark to give information as to where he procured it, on a demand being made to him in writing. To mark any false indication of quantity is also punishable with penalties. The indictment, moreover, need not specify who is intended to be defrauded by the fraudulent use of spurious marks. The vendor of the article with a trade mark is to be deemed to warrant to the purchaser that the mark is genuine, unless otherwise vouched for in writing, and the time during which proceedings may be taken is limited to three years. Taking into consideration the clauses of this Act, and reviewing the decisions in the various courts of law, both previous and subsequent to its passing, the following deductions, I take it, may be fairly inferred :—

A trade mark is any name or device adopted by a person to designate goods to be of his manufacture. It is both a guarantee of origin and of quality, and has for its object the protection of the manufacturer from a fraudulent sale of another's goods as his, as also the protection of the public or consumer from the sale to him of inferior goods. Goods so marked, in time, consequent on quality, obtain a reputation, and custom is directed to that particular manufacture. If a consumer buy an article with a counterfeit mark, the manufacturer is defrauded of the sale of his goods, for which he has often, at a great expenditure of capital and time, gained a reputation. If the consumer buy such an article, and it be of inferior quality, he also is defrauded by the counterfeit.

A most important point for notice is that a trade mark is property. Since 1863, it has clearly been laid down, in the cases of *Edelsten v. Edelsten*, *Hall v. Barrows*, and the *Leather Cloth Company v. American Leather Cloth Company*, that the right to a trade mark is a right to the exclusive use of it; that it is, therefore, property, and will be protected by the court as if it were property, whether the infringement is mentioned or not. This principle was broadly stated by Lord Westbury in *Hall v. Barrows*, and again maintained by the same learned judge in the *Leather Cloth Company v. American Leather Cloth Company*; and, moreover, was approved by the House of Lords in the same case. But though a trade mark is undoubtedly property, it is not so for all purposes; for a proprietor of a trade mark cannot prevent another person from using the same mark for other descriptions of goods; and, even when applied to the same goods, he must show in an action at law that there has been a false representation, calculated to mislead the public. Now, as a trade mark is acquired by use, it is necessary for the plaintiff, in all suits for infringement, to show that he or his predecessors used the mark before the defendant, and that it was known in the market to be so used, a proof which frequently causes very great expense and trouble.

There is no question or doubt that the Merchandise Marks Act has been of great public service, but many traders have found the vehicle a cumbersome and expensive means of redress, and therefore have failed to avail themselves of its advantages, awaiting the time when a system of registration of trade marks would materially simplify, cheapen, and expedite their means of remedy. Both Mr. Poland and Mr. Edward Lloyd, of Lincoln's-inn, have published admirable treatises on the Merchandise Marks Act, and both these gentlemen, whose knowledge of the subject is unchallenged, complain that the present difficulties of proving a fraudulent intention, and at law actual damage, deprive the Act of many of its advantages; and both believe that a system of registration of trade marks will render process for infringement of trade marks more easy and effectual. Any measure tending towards so desirable an end would, I am sure, be thankfully received as a boon by the com-

mercial body of the country. In 1862, the subject was discussed by the Select Committee, but who postponed the further consideration of the matter until it should be seen how the Merchandise Marks Act operated. In 1866 a further Bill was drawn up by Mr. Underdown, under instructions from Mr. Travers Smith, but failed to become law. In 1868 the Government again had under its consideration a scheme for a system of registration, but this also fell through for the time; and, should any Act ever be passed, much will be due to those gentlemen whose names I have mentioned, and to them I would also add the names of Mr. Edmund Johnson and Mr. Arthur Ryland, who have been untiring in their exertions to ameliorate the law upon the great question of commercial fraud.

It is with this object in view that I have ventured to call your attention to the subject this evening, feeling certain that all public discussion on the question will be of use, and strengthen the good cause of those anxious to see a system of registration of trade marks become the law of the land.

The object, firstly, of having a registry is twofold—to assist the owner of a trade mark in proving his right to it against an infringer, and to enable persons about to adopt a trade mark to ascertain what trade marks there are, and so avoid imitation. The registration of a trade mark would give the person registering it a *prima facie* right to the exclusive use of it, and would materially assist the person registering by throwing on the infringer the burden of disproving the title of the person registered by showing prior use or misrepresentation. The register would also be conclusive evidence of the use of a trade mark at the date of registering, and thus facilitate that proof now necessary for showing a title, so often very troublesome and costly. It would further create a new and most useful right, *i.e.* the right to a trade mark without use, for the register being necessarily an open one, it would be the duty of any one registering a mark to inspect the register beforehand, to see that he has not been anticipated. The system of registration will therefore facilitate and cheapen proof of trade marks in legal proceedings, on the one side by supplying evidence; on the other, by rendering evidence unnecessary where the defendant does not impugn the plaintiff's title. The registry should be a voluntary one, for, were registry compulsory an unregistered trade mark would be deprived of protection. Now, in many instances, we know a trade mark grows up gradually, and it would be unfair to deprive the possessor of protection because he had, meanwhile, failed to recognise its character as a trade mark and to register it.

The measure should be a tentative one, and in making it tentative we should alter no existing right, nor should we introduce any new one. It would be better to allow the courts, as each case arises, to deal with it according to its special circumstances, rather than to establish a rule.

A registered trade mark should be distinguished from others by the addition of the letter "Rd," and the public knowing that all honest manufacturers wish to identify themselves, will look for the trade mark and see if it be registered, and will at a glance see where and how they can verify the same. Another and very strong argument in favour of registration is, that it would give English manufacturers facilities for obtaining protection in foreign countries, and be useful in urging on a scheme for international commercial reciprocity. Hamburg, for instance, has refused to listen to any mutual scheme, on the ground that no registration of marks exists in this country. Until our present system is amended by some such scheme, great difficulties will always be experienced in negotiating with foreign countries for protection under their laws. I have cited these as a few of the many advantages that would arise from a system of registration. The imitation and piracy of trade marks is a scandal to the country, and any measure tending to lighten the enormous expense which the present state of the law requires for the protection



of trade marks, will be of inestimable advantage not only to the manufacturer, but also to the consumer; and, moreover, will materially strengthen the reputation for integrity of English commerce in foreign countries. In 1869, after several years' fair trial, the Merchandise Marks Act had been found to be of great use, but I believe it to be the universal opinion of the commercial community that, although it has effected much, yet it wants a system of registration to be appended to it in order to give complete satisfaction. If by venturing this evening to bring before your notice the question, and inviting discussion on the same, I shall in any way have assisted to ameliorate the law on the great question of commercial fraud and piracy I shall feel myself fully rewarded.

#### DISCUSSION.

MR. HYDE CLARKE said that a few remarks on the history of the subject might not be inappropriate. They had had from the author a most interesting and amusing account of the origin of trade-marks, but he apprehended that his view was hardly consistent with the facts. Mr. Robertson had traced the origin of trade-marks to sign-boards, and had referred to an interesting passage in the history of the Society many years ago, but if they looked to the history of sign-boards themselves, they would see that there were many things which showed that they had no connection with trade-marks. They knew that, in mediæval times, signs were often adopted from the patron saints, either of the trade or of the individual, and were used for purposes of religious protection, and in no sense as trade-marks. Others, again, as for instance the Bear and Ragged Staff, the cognisance of the Nevills, were adopted by the retainers of noble families; and the well-known arms of the Lombards was another instance of a very common sign, which had no affinity with a trade-mark. In the same way he should much doubt whether the tokens to which reference had been made, and which originated in the times of Charles the First and the Commonwealth, had any connection with trade-marks, many being issued not by manufacturers at all, but by the keepers of public-houses, and others who had occasion to issue tokens. A far better origin for the system of trade-marks might be found, at an early period, in the operation of the great Hanseatic Guild. There was a great trade in wool with this country conducted by that guild, and each pack bore a peculiar mark, very different in character from a sign-board, but which was useful, in those unlettered days, in making out the ship's manifest, in the same way as the trader in the Far West, who, not being able to read and write, kept his accounts in symbols, and once charged his customer with a cheese instead of a grindstone, through not marking the hole in the centre. Many articles at the present day bore trade-marks which had been connected with them from the Middle Ages, as, for instance, swords and articles used in warfare. With regard to the system of registration, he was sorry that Mr. Robertson had not given them fuller information as to the practice in many foreign countries, and even in the City of London itself, for the registering of trade-marks had been provided for by the bye-laws of many trade guilds and corporations from very ancient times, even in England. There was no doubt that the successors or descendants of persons in trade had been in the habit of continuing the signs of their predecessors, and in this way antiquaries were accustomed to account for the many instances of double signs which were to be met with, the person using them having inherited signs from two parties, which he had combined. His own experience afforded ample example of the evil arising from the imitation of goods and trade marks. In the most remote part of Asia he had found it very common for men who could not read a word of English to depend in the purchase of an article—as for instance a watch—upon the English trade mark, having had it once inter-

preted to them by the merchant. On one occasion he remembered a number of Turkish country gentlemen displaying their valuables, when one of them produced his watch, the name and mark upon which were well-known in the Levant trade, but which, in this instance, had been pirated. He himself had actually brought back from Constantinople, unwittingly, a Swiss piracy of a well-known English watchmaker's goods. Hardware and goods of that class were sold throughout the East, not with the marks of the real German, Belgium, or Swiss makers, but with English marks upon them. In almost any part of the East you might find what were called English shops in the bazaars, and pedlars calling out in the language of the country that they had English goods for sale, when in reality hardly a single article was really English, the majority being foreign imitations with pirated English marks. Certainly if any registration of trade-marks would secure anything like the protection of English articles in foreign markets, it would be a great advantage. At the same time it must be remembered that this was not a matter connected with the manufacturers alone; the indolence and ignorance of the traders had a great deal to do with it. In any part of the world almost, unless where the language had an affinity with the French, it would be found that the English merchant did not make himself properly acquainted with it, while the German dealer began to do so at once, and the consequence was that he had far greater facilities for transacting business than the Englishman, and he was able to sell his goods with an English forged mark upon them, instead of their being obtained from an English house. With regard to the instance mentioned by Mr. Robertson, that of Hamburg, he looked upon the excuse made that there was no registration of trade marks in England as a mere pretext. Hamburg was not a manufacturing place, and he questioned very much whether there was any registration of trade marks there of any value; but he knew that the Hamburg merchants had a considerable hand in the exportation of imitations of English goods. They must not delude themselves with the supposition that the registration of trade marks would completely extirpate this system of piracy, but at the same time there was no reason why they should not do the best they could to limit the evil, particularly in the mode indicated.

MR. EDMUND JOHNSON said that the last speaker had very properly alluded to the system of registration already in existence in certain trade guilds, and a very good illustration might be found in Sheffield, where the registration by the corporation of cutlery was so perfect, and they were so jealous of any interference with their established usage, that they always procured an exemption for themselves from any Act which was passed on the subject. In drawing any scheme to apply to the whole country, therefore, he thought they could not do better than endeavour to extend the system which had worked so successfully in Sheffield. Manufacturers might be divided into three sections or classes; first, those engaged in trades which did not admit of, or had never been in the habit of using, distinctive marks; secondly, those who were now using trade-marks; and, thirdly, a very much larger class, who were waiting to adopt trade-marks until they saw complete protection established. Such a case as this had very often happened; a manufacturer, say in the north, finding his business much increasing, went to a great expense in advertising and making known his trade-mark; suddenly another manufacturer, at the other end of the kingdom, finding the trade-mark of value, set up a claim, alleging that he had priority by some months, or perhaps some years, in the use of it, and commenced proceedings for an injunction, and, perhaps, an account of profits. Both parties might be, to a certain extent, in the right, and this state of things could only be met by a regular system of registration; the party registering would, of course, have to ascertain that no such mark as he

proposed to adopt was already in use, for, if it were, he would have to take another. There was another class of cases, in which the trade-marks of different manufacturers very closely resembled each other, and of course, in any efficient system of registration, means must be provided to prevent any such confusion arising. About two years ago there was a very important case tried, in which two manufacturers used, one the head of an elephant, and the other that of a horse; the two marks were quite distinct when on a large scale, but when reduced to about one-sixteenth of an inch, so as to go on a packet of needles, it almost required a microscope to distinguish between them. These two gentlemen spent a great deal of money in Chancery proceedings, but neither of them gained the victory. A proper system of registration would prevent such confusion, and form in fact a corollary of the Merchandise Marks Act, which was incomplete without it. The Society of Arts had been constant advocates of such a measure. In 1859 Mr. Leone Levi read a paper on the subject, and it was again taken up in 1863, at his own solicitation, in connection with the Exhibition Medals Act (which was to a certain extent a trade-marks bill), when, by dint of great exertion, they accomplished the remarkable feat of getting an Act of Parliament passed in five days. Again, in 1866 a Trade Marks Committee was appointed (of which he had the honour to be reporter), and in that capacity a number of instances came under his notice which showed that whatever importance the subject might appear to possess at first sight, further investigation proved even more strongly the necessity for dealing with it. Great manufacturers of every class gave evidence as to what they required, and all were unanimous as to the necessity for a system of registration. Next came the Bill to which Mr. Robertson had alluded, drawn by Mr. Underdown and others, which he much regretted had not become the law of the land. Manufacturers constantly hesitated before adopting a trade-mark, and only within the last few days he had had three letters asking whether certain devices were already in use as trade-marks. One gentleman wrote about corrugated iron, and wanted to know whether there was any "camel iron" or "leopard iron" known in the market, so that he might decide what animal to choose for a mark. Under present circumstances no one could tell what was in use as a trade-mark and what was not, but he hoped that these difficulties would shortly be removed, to which end the present agitation and discussion of the subject would no doubt greatly tend.

Mr. UNDERDOWN, remarking that his name had been more than once referred to, said it was true that he had for some years past devoted a good deal of attention to this and cognate subjects; such as the protection of copyright in works of art and the Exhibition Medals Bill, of the passing of which in five days he had a very lively recollection. He had read a paper to the Society on the subject, in 1866.\* The latest legislation was the Hop Prevention of Frauds Act, with which he had something to do, the object being to prevent the marking upon pockets of hops a different year from that in which they were grown, and the putting of the Kentish horse upon hops grown in Sussex. All these measures depended on the same principle; and, whatever might be said on the history of the subject, he thought they had gone past that now. The subject had been very little discussed; and, although it was to the interest of a great many manufacturers to oppose any legislation of this kind, they being makers of imitation goods, still almost all were agreed that some measure was necessary. The first question to be asked was, what was a mark? and he really thought, without going into the question whether trade marks arose from sign boards, medals, or anything else, they would all agree that when a man sold an article

with a certain mark upon it, that mark represented something; it was a statement of a simple fact, and common sense and the oldest law of the country recognised the fact that if a man gave a distinct description to another man of the goods which he sold, that was a warranty to the extent of that description, and a warranty to the extent to which that description was understood by the party buying; for it was a well-known principle of equity that a contract must be understood in the sense in which it was understood by the man with whom the contract was made, and in the sense in which the man who sold knew that the other did so understand it. In all these cases, therefore, the principle of *caveat emptor*, upon which many sought to lay too great a stress, was inapplicable. The question was, not whether the counterfeit goods were equal in quality to the genuine, but a man bought a certain article which was represented to be made by a certain manufacturer whose mark it bore, while in reality it was made by some one else and bore a forged mark. There was no mystery in the matter; it was to him one of the plainest propositions which could be entertained, that a man putting a false trade mark on an article committed a fraud at law; such was not the opinion, however, for a long time, although it had now been pretty well established. With regard to the question as affecting foreign commerce, it was quite true, as stated by Mr. Hyde Clarke, that persons who could not read English depended on the mark, and they need not leave Europe in order to find instances of the frauds which were committed. He had observed, during two years' residence in Spain, many instances of the kind. Madrid was full of imitations by German makers of English goods, many of the articles being such trash as could hardly be conceived by anyone who had not seen them. After an immense deal of difficulty he succeeded in getting a genuine two-bladed knife, by Rodgers, for which he paid 4s., but he believed that was the only one in Madrid. Whilst he was there he was consulted by an English watchmaker of considerable reputation, who, having obtained prize medals at the Exhibition of 1862, and at the Paris Exposition, had given a Madrid tradesman permission to sell his goods. After a short time this man declined any further dealing with the English watchmaker, but continued to make use of his name to sell other watches. He (Mr. Underdown) was obliged to tell the manufacturer that, owing to the state of law in England, he would have great difficulty in protecting himself. If in England, as in most other countries, there had been a system of registration of trade marks, he would only have had to produce evidence of his registration, and although (as he had stated on a former occasion) the Spanish law was not administered in the best possible manner, in such a case he would have obtained speedy redress. As it was, however, he was obliged to proceed in quite a different way. Such an instance strongly showed the necessity for a system of registration of trade marks, but although the thing seemed so plain, it was astonishing how difficult it was to get it realised by men who had not turned their attention to the subject, for it was only very recently that one of the members of the Government had become a convert, and was prepared now to support a bill such as was brought in last year, and now he believed the only remaining question was as to the manner of registration, and how it might be made most effective and least troublesome. The bill which he had the honour of drawing in 1866, in conjunction with Mr. Poland, under the instruction of Mr. Travers Smith, was most amply discussed at the time, when they had the advantage of the presence of Mr. Daniel and Mr. Webster, both of whom were well acquainted with the law of patents; and there was no dissentient voice, except, perhaps, that of the Chairman, who was not satisfied that the public would be protected. He was confident, however, that they would be, at least indirectly, because proof of fraud would be so much more easily afforded. The differences between that bill and the one introduced last year—

\* *Journal*, vol. xiv., p. 370.

which probably would form the basis of future legislation, were very trifling, the principal one, with which he agreed, being that, although the registration would be purely voluntary, a man losing none of his property in his trade-mark by neglecting to register, still, unless a person did register, and so give notice to the public, under the Bill of 1866 he could not bring legal process against another for an infringement of his right. Certainly, if they wanted to have the system thoroughly carried out, in his opinion some such provision would be necessary or desirable. The great advantage of registration, as Mr. Robertson had justly observed, was the evidence which it would afford of the right of user and priority of user in a certain mark. Another alteration in the last Bill was, that to meet, if possible, the views of all parties, provisional registration for a certain time would be allowed. It was proposed that merchandise should be divided into different classes, such as hardware, porcelain, &c., each having a distinctive letter, with a numeral differing in each instance. A person would register a mark, say for three months, and after that time, if no objection were made, it would be regularly entered, still being liable, however, to be removed, at the request of any one who could show that he had a prior right to the mark. The mode of registration recommended was exceedingly simple, and he was quite at a loss to know how it was not yet been carried out. Whatever trifling difficulties there might be would be easily got over, and the result would be a great advantage, not only to the manufacturer, but to the public as well, and its effect would be felt not more in England than in the colonies and in foreign countries.

Mr. ARTHUR RYLAND desired to protest against the assertion which he understood Mr. Underdown to make, that it was the interest of a majority of manufacturers to oppose registration or any other system which would give an easy remedy against the piracy of trade-marks. He had always understood it to be an acknowledged principle that honesty was the best policy, and he believed those who were base enough to pirate trade-marks were in a considerable minority.

Mr. UNDERDOWN said he would withdraw the expression majority if he had used it.

Mr. RYLAND said he could not help expressing his great pleasure at hearing that probably something would be done in the way of registration, and, although Mr. Robertson had nearly exhausted the reasons for such a measure, he might add this, that were there a system of registration, the owner of a trade-mark would only have to go through the process of proving his property in it once, whereas at present, if he were called upon to take proceedings against imitators twenty times, on each occasion he must go through the whole process. On this subject he believed all the Chambers of Commerce were unanimous, much as they differed on other points, and if the Society of Arts, which had taken so active a part in this matter (he himself having been a member of the Committee to which reference had been made), were to put itself in communication with the various Chambers of Commerce throughout the kingdom, he was quite satisfied they would receive such support as would materially assist in carrying a measure through Parliament. The Committee of the House of Commons which investigated this subject, had before them the officers of both the Patent office and the office for the Registration of Designs, each of whom expressed a willingness to undertake the registration of trade marks, so that there was no force in the objection sometimes made that the amount of work would be very great. In conclusion, he hoped that in any measure which was passed, provision would be made for the summary punishment of any one who pirated a registered mark, in addition to the civil remedy in the way of damages. In some Continental states he understood that the owner of a trade mark had a right to seize any article bearing an imitation of his mark in the hands of another person, and to demand from him proof that he had used it

innocently himself, or the name of the party from whom he had bought the article. He should be a strong advocate for some stringent measure of that kind.

Mr. P. L. SIMMONDS said that Mr. Robertson had devoted so large a portion of his paper to the assumed origin of trade marks, which had been further amplified by Mr. Hyde Clarke, that but little more need be said on that part of the question. It was well known that the workman's mark on his work had been in use in many trades and countries from time immemorial. Many guilds and crafts still perpetuated the custom, as with our goldsmiths, cutlers, &c. Even in remote China and Japan skilled workmen affix their mark to specimens of pottery, metal work, or carving in ivory, which they consider creditable to their skill, and these marks had come to be well known and appreciated by connoisseurs. But, besides the ordinary use of Chinese trade marks in the commercial papers of Hong Kong, Shanghai, &c., there was scarcely a state on the Continent in which trade marks were not adopted, and the manufactures of many firms, distinguished by their marks, had risen into great importance, and obtained world-wide reputation. The subject of trade marks was not a new one before this Society, although Mr. Robertson was apparently unacquainted with what had been done here and elsewhere in the matter. He had not alluded to the paper of Professor Levi,\* delivered ten years ago, nor to the able one of Mr. Underdown, on the "Piracy of Trade Marks," read in that room three years ago, and which dealt so well with the legal part of the question, citing not only the law cases quoted by Mr. Robertson, but numbers of others. Mr. Johnson had alluded to the committee formed three years ago by this Society for inquiring into the laws of England and foreign states upon the subject of trade marks, &c., a committee consisting of some seventy or eighty of the most influential manufacturers, representatives of commercial towns, and others, and on which he (Mr. Simmonds) had the honour to serve. He was glad to find Mr. Ryland present supporting the movement, for he held in his hand copies of the very important papers published by that gentlemen ten years ago on "Trade Marks," in which he so ably urged that registration was essential to successful legislation. The subject was not, therefore, a new one, although it wanted continual agitation before its success could be ensured. Early in 1860 the Associated Chambers of Commerce, at their annual meeting, memorialised the Government, urging that the proceedings in our courts, both civil and criminal, would be simplified and rendered less costly by a registry of trade marks, and asking for the establishment of such a registry, and for conventions with foreign states on the subject. And yet no progress had been made, for, at their last annual meeting, two months ago, a deputation again waited on the Board of Trade, urging upon the Government the importance of introducing a Bill into Parliament for the registration of trade marks. He (Mr. Simmonds) had taken some interest in this matter, from its being brought prominently under his notice at the various International Exhibitions with which he had been officially connected, and during his visits to our leading manufacturing towns. In a recent tour which he had made last month to the chief seats of our manufacturing industry, he had looked narrowly into the subject, and had found a general desire expressed for registration, and further protection of trade mark rights. There were many merchants and shippers who had their marks as well as manufacturers. It was disgraceful to think that in this, the chief manufacturing country of the world, we had not like advantages for registering trade-marks to those enjoyed in France, Austria, the United States, Canada, India, and other British possessions. In several of these the penalty for imitating or using trade-marks with intent to deceive were very heavy, and, in some, accompanied by imprisonment. He must admit that he was somewhat disap-

\* *Journal*, vol. vii., p. 262.

pointed in the scope of the paper read that evening. He had hoped that a gentleman enjoying the official experience and advantages which Mr. Robertson did, would have favoured them with some useful suggestions as to the form of registration to be adopted, the best system of classification for trade-marks, the mode of publicity, the most suitable fees for registration and for searching the register, and the limit of time for registration, founded upon the practice and experience of other countries. But at all events the subject had been once more discussed, and he hoped soon to find some other official and legitimate register for trade-marks adopted, than the heterogeneous one of the Stationers' Hall, where book-titles, newspapers, and trade-marks were jumbled together without system, illustration, or classification, and utterly inaccessible for reference, comparison, or even legal proof. Ten or twelve years ago France had passed an excellent law dealing with the whole question, and there the marks might be deposited at the nearest Tribunal of Commerce, but the complete register was kept for reference at the Conservatoire des Arts et Métiers, Paris. Although we had protection for our trade marks under the Treaty of Commerce, we had absolutely no register to which we could refer.

Mr. CAMPIN, having had some experience of patent matters, was convinced that the registration of trade-marks was a very desirable thing, and would be useful in many ways, more especially in affording facilities for the establishment of a title to property in a particular mark. On the other hand, it must not be supposed that it would accomplish everything which was desired, and he should strongly oppose a provision which would allow the registration of a mark not actually in use. Such a thing would really increase the difficulty which Mr. Johnson spoke of, that manufacturers would be at a loss what mark to select. As to registration being voluntary, he was convinced that if it were so it would be necessary to deprive those who did not register of all facilities for prosecuting piracies, but he saw no objection to its being compulsory. He could not quite agree in the eulogium passed by Mr. Robertson on the Merchandise Marks Act, for, to his thinking, it was needlessly encumbered, in almost every clause, with a tremendous farrago of words, such as bottle, stopper, package, case, wrapper, and so forth, but, at the same time, it was undeniable that any action under it was very much embarrassed by the want of registration. His idea was, however, that many persons adopted the same course with regard to trade marks as they did with patents, instead of copying a thing exactly, they attempted to evade it, making a label which in colour and general arrangement appeared at first sight exactly like the genuine label, but which, on an attentive examination, showed material differences. A case of this sort had occurred very recently with regard to Mr. Bass's trade mark, which consisted of a red triangle, another person having adopted a Spanish shield reversed, which at first sight appeared very similar, though there were certain points of difference. When the case was heard it was further complicated by the fact, which was clearly shown, that the label bore almost as great a resemblance to some used by other brewers as it did to Mr. Bass's; so that in this case the registration of the triangle would not have decided the question whether the other party was an infringer. The rule as to resemblance was thus laid down by Lord Chancellor Cranworth. "It was a mistake to suppose that the resemblance must be such as to deceive persons, who should see the two marks placed side by side; a rule so restricted would be of no practical use. If a purchaser looking at the article offered to him would naturally be led from the mark annexed to suppose it to be the production of a rival manufacturer, and purchase it in that belief, the court considers the use of such a mark to be fraudulent." This was a very important point to be considered, but he quite agreed in the main principle enunciated in the paper.

Mr. J. W. MAY (Consul-General for the Netherlands)

desired to say a word or two on the subject from an international point of view. A great deal had been said as to the imitation of British trade marks by foreigners, but his attention had lately been called to the imitation of foreign trade marks by English makers, with regard to articles sold in British colonies. On inquiry he found that the only attempt at protection of an article for the foreign markets was, to take a sort of underhand advantage of the Foreign International Copyright Act, and register the trade mark under that act as a book or printed matter, or some vague term which was to be found in some of the clauses. That, of course, was very unsatisfactory, and this part of the subject should not be forgotten in any legislation on the question. The interest of the buyer was to be considered as much as, and was in fact identical with, that of the producer.

The CHAIRMAN said there was one economical effect in respect to trade-marks which had been overlooked, namely, the saving of what Mr. Babbage had well designated "as the labour of verification." This labour, in social life, in seeking supplies, in comparing different articles, in trying to get evidence as to their real qualities and values, was often very considerable, very uncertain, and very annoying. The saving this labour, in respect to the real qualities of articles of gold and silver, made it worth while to incur the expense of the "Hall mark," and so it would be with trade-marks when protected. By saving this labour of verification, an obstacle to free trade was removed, and consumption was stimulated, and in that point of view he thought the use of intermediate trade-marks was quite warrantable. If they found a merchant's mark upon an article, it did not imply necessarily that he had made it, but that he had examined it, and, in fact, gave his warranty for it. All that was required was, that the mark should denote a truth, and represent a property, because the merchant who had spent time and labour in searching for articles and examining them, so as to enable himself to give credit to them, had acquired a property in them, and was entitled to protection. The Trade Marks Bill went to the source of gross, wide-spread, and grievous immorality in trade, which had become the opprobrium of the trading community. It might be said that our religious teaching in churches as well as schools was, in default in respect to it. It had been well pointed out by Mr. Froude, in his admirable inaugural address at St. Andrew's, that the clergy were to blame for doing nothing to repress cheating and demoralisation in trade. For a number of years he had never, amidst a mass of sermons, seen one against these sins; the text that "Lying lips are an abomination to the Lord" had been neglected by them, and churches and chapels turned out liars and cheats unreformed. Not very long ago he had visited a French pottery, where he found the workmen busily employed imitating English goods and putting English marks upon them; and shortly afterwards, on visiting a pottery in England, he found the compliment was returned by imitations of French goods being made, with pirated French marks. It was, moreover, curious that the proprietor of this concern, who was very proud of his skill in these imitations, happened to be a man of remarkable piety, who then or formerly was accustomed to preach, hold prayer meetings, and so forth. Positive law must correct these defaults. Some advances had been made against the vice in the home trade, but international frauds had to be repressed by treaty. It was to be hoped that the time would come when nations would be as tenacious of their seals and their trade-marks as they assumed to be of the honour of their flags. It behoved us not to be behind others, and to be in advance in maintaining the honour of our trade statements, and respect for trade property. Improved legislation should give facilities for proving property in trade marks and punishing infringers, and he thought the only question now was, how that could most easily, cheaply, and efficiently be accomplished. In conclusion, he proposed a cordial vote of thanks to Mr. Robertson for his valuable and interesting paper.

The vote having been passed,

Mr. ROBERTSON, after acknowledging the compliment paid him, said he had not touched upon the details of any proposed legislation on account of his official position. Last year he had had the honour of giving birth to a little bill on the subject which proved abortive, and had to give way to another one more complete, which he believed would have passed, but for the sudden action in connection with the Irish Church Bill, upon which the Government went out of office. His real object in reading the paper was to invite discussion, feeling satisfied that the subject only required to be talked about and understood in order to ensure action on the part of the Legislature.

### THE SITE FOR THE LAW COURTS.

This subject, which has been discussed at length before the Society's "Thames Embankment Committee" (see *Journal*, Nos. 853, 854, and 856), was debated in the House of Commons on Tuesday evening last. According to the abstract of the debate given in the *Times* of Wednesday last—

Mr. W. H. GREGORY moved a resolution calling for the reconsideration of the present arrangement to build on the Carey-street site, and argued earnestly for the Thames Embankment, which he maintained had never yet been considered. Altogether he calculated the Carey-street site, including approaches, would cost £3,150,000, while the river site would not cost more than £1,500,000, and would require no new approaches. The Embankment, he argued, would be most convenient for the lawyers (both barristers and solicitors) and the general public; it would secure the important *desiderata* of light, quiet, and ample accommodation; and, among other inducements, he mentioned that a company was ready to buy the land recently cleared in the Strand, for the purpose of building chambers and offices. The change, he held, would not involve a month's delay, and he insisted on the change of design as the last means left of redeeming this town from the opprobrium of being the dingiest and meanest of capitals.

Sir ROUNDSELL PALMER moved, as an amendment, a counter-resolution, calling for the immediate prosecution of the Carey-street design, and the purchase of whatever additional land might be necessary in immediate proximity to that site. In his turn he insisted on the superior advantages of Carey-street, as being midway between the Temple and Lincoln's-inn, and by far the most convenient for the solicitors, the great majority of whom lived north of the Strand. It gave, too, the greatest facilities for enlargement, and its levels were incomparably the most favourable for architectural effect. The Thames Embankment scheme was as yet *in nubibus*, though he contended, in opposition to Mr. Gregory, that it had been fully considered on its merits before Carey-street was chosen, and that all the reasons which then prevailed against it remained in full force. At the very least, before a stone was laid, it would cost £3,000,000, and by its selection all the benefits of concentration would be lost. Sir Roundell Palmer urged the House very earnestly not to sacrifice all the money, time, and labour which had been spent, to what he ridiculed as the visionary dreams of the "*dilettanti* gentlemen" and "the demon of good taste."

Mr. BERESFORD HOPE was anxious to secure both sites, and, while unwilling to surrender Carey-street, the artistic capabilities of which he warmly eulogised, he recommended that the Thames Embankment should be utilised for the Probate Registry, or some other public building, which would be an ornament to it.

Lord BURY grounded his support of the Thames Embankment on its architectural capacity and its admirable ready-made communications, while Mr. DENMAN, Mr. G. GREGORY, Mr. COWPER, and Mr. WHEELHOUSE defended the Carey-street site as the most central and

the most convenient. Mr. GREGORY also urged the House not to waste more time in closing this controversy finally, and, on what he held to be good authority, declared that the Carey-street site could not be re-sold under a loss of half a million.

Mr. TITE decidedly preferred the Embankment site, but agreed with Mr. Beresford Hope that both ought to be secured, and suggested that a depository for wills should be built between Arundel-street and Essex-street.

Lord JOHN MANNERS held that this would lead to great confusion, and would violate one of the chief recommendations of the Commission—that the courts and their offices should be in close contiguity. Lord John supported the present arrangement, and pointed out that the change was opposed by the lawyers and all who had business in the courts, and was only promoted on æsthetic grounds by people who wished to make "a great metropolitan improvement." But even in that light he contended that a building on the Carey-street site might be made the greater adornment; and he urged that though the suitors might fairly pay for the site and a convenient building, it was not fair that they should pay for architectural whims. He analysed Mr. Gregory's estimates, and advanced some of his own, from which he argued that the river site, from the additional foundations, the alterations which would be needed in Somerset-house, and other features of it, would be infinitely the most costly. He earnestly deprecated a change in the plan merely for the sake of one Government reversing the decision of its predecessor—a deplorable practice, which had caused much expenditure and delay in these matters.

The CHANCELLOR of the EXCHEQUER went elaborately into the finances of the question, and startled the House by stating that the estimate now made by the Commissioners for site and building, &c., was £3,200,000, and that, with approaches and other accompaniments, we should not get out of the business for less than £4,000,000, whereas the original estimate was only £1,500,000. This increase Mr. Lowe attributed to the frenzy for concentration which had led the Commissioners to enlarge their original plan, and to propose what he called a "Tower of Babel" and a "Vanity Fair." Believing that there was a great disadvantage in over-concentration, Mr. Lowe advised the House to retrace its steps and to return to the original modest scheme. Acting on his own responsibility, he said he had already stopped all the expenditure on the present scheme within his reach, and had refused his sanction to the outlay of £600,000 for additional land until the pleasure of the House could be taken. Before giving his opinion as to the course the House ought to pursue, he dispelled a general delusion that the cost was to be paid by the suitors, by showing that the courts as a whole required £52,000 from the Consolidated Fund beyond the sum they received in fees. The security which the Commissioners offered for the £1,395,000, which they proposed to borrow from the Treasury, was the imposition of a storage fee on every probate, and this Mr. Lowe contended was merely another form of Imperial taxation. He advised the House to dissolve this Commission, with which it was impossible for him to co-operate, and to place the power and responsibility in the hands of the Government, and he stated that the mode in which the Government would propose to exercise this power would be by building on a site of six acres between Howard-street, running from Surrey-street across Norfolk-street to Arundel-street, and the Embankment. This, he anticipated, might be bought for £600,000, and a building which would contain all the courts and their offices might be erected for £1,000,000 there; and he suggested that the façade designed by Inigo Jones for Charles I.'s palace might be placed in front of it. Asked by Sir John Pakington what he proposed to do with the Carey-street site already cleared, Mr. Lowe was strongly of opinion that by a little confidence and patience the Government might dispose of it without a sacrifice. At any rate, it would be wise to know when to make a loss,

but above everything he urged the House to shake itself free at the earliest moment from the extravagance to which the Commissioners' latest plan would lead it to.

Mr. HENLEY remarked that the issue now raised was an entirely fresh one, and as the House could not possibly decide on the new plan submitted to it, he proposed that the debate should be adjourned.

Mr. CRAWFORD seconded this, and animadverted rather sharply on the dilatoriness of the Ministry in acquainting the house with its change of mind.

Lord JOHN MANNERS suggested that, as the motion and amendment were now equally irrelevant, the adjournment should be merely formal, to enable the Government to submit a scheme entirely on their own responsibility.

The CHANCELLOR of the EXCHEQUER acceded to this understanding, and after some further conversation the debate was adjourned for a month.

In commenting on the above debate, the *Times* says:—"Mr. Gregory's motion for placing the new courts of law on the Thames Embankment has been adjourned, after a debate in which such extraordinary difference of opinion prevailed, that the necessity for delay and inquiry was fully established. The upholders of the scheme which has already received the assent of the Legislature have had every advantage. They are, as it were, in possession; their plan has been sanctioned, and on those who question the fitness of the Carey-street site has been naturally imposed the burden of giving reasons for the change they recommend. The defenders of the position have been fortunate in enlisting the ablest of modern advocates, whose prepossessions in favour of his own Inn of Court, make him, as we think, blind to many of the advantages which the rival scheme possesses. They are also strong in numbers, they are united, and they have done all that numbers and union could effect to make it appear that the friends of the new site are either foolish *dilettanti* or interested speculators. Yet, when the matter is brought before the House of Commons, the change that has been effected in the minds of the Legislature is evident. Whereas some time since, when the Embankment site was first seriously proposed, most people were disposed to think the matter settled, and further discussion useless, the debate of last night shows that in the House of Commons there is a large number so convinced the existing Acts have been hastily passed, that they would, at the cost of considerable further delay, inquire into the subject. Certain it is, that if we were now legislating for the first time, the Carey-street site would find nothing of the favour which it met with years ago. Mr. Gregory had not much difficulty in showing that the cost of the present site will be enormously greater than was anticipated. A sum of £800,000 has been already spent, and as much more will be called for before the first brick can be laid. The place is bordered on three sides by narrow thoroughfares, among the meanest and most inconvenient in London. It cannot be denied that other edifices not comprised in the present estimate must necessarily be removed, even though the Courts of Law themselves do not assume any extraordinary dimensions, and the cost of approaches will be, as every one who knows the neighbourhood is aware, beyond all calculation. On the other hand, sufficient has been proved concerning the Thames Embankment site to induce further inquiry. It has been shown that it possesses manifest advantages; that it will have a broad thoroughfare front and back, a broad river before it, a good light, such as Somerset-house possesses, and, indeed, every advantage which a place of public business ought to have. The contrast between a building on this site, and another which would be almost as unfortunately placed as the Rolls building in Fetter-lane, has struck most of the unprejudiced people who have examined the question, and there has consequently been a general demand for reconsideration. This was what

the House of Commons decided on Tuesday night. Mr. Lowe's remarkable speech gives, we believe, the death-blow to the Carey-street scheme. He startled the House, and he will certainly startle the public, by his statement of the enormous expenditure into which this gigantic undertaking has been leading us. He stated that the estimate now made by the Commissioners for the site and building was £3,200,000, and that, with approaches and the rest, the total cost would not be less than £4,000,000—a calculation which shows how little dependence is to be placed on the assertions of Sir Roundell Palmer's clients. Mr. Lowe and the Government will receive the approbation of the country for having at once stopped all expenditure in the matter. Four millions instead of a million and a-half are enough to compel a new examination of the whole subject. So Mr. Lowe has refused to sanction any further outlay for land, and the Government desires that the question of the law courts and their site should be once more entrusted to themselves for further inquiry. With this the House of Commons was satisfied, and we hope the subject will be entered upon *de novo* with greater knowledge and with greater prudence. Mr. Gregory's motion has resulted in a substantial victory, for the advocates of the Embankment site now have all they can in fairness demand—the opportunity of stating their case before an unpledged and unprejudiced tribunal. There are also other considerations which make it advisable that the subject should be reconsidered. Mr. Lowe strongly deprecated excessive centralisation, and his remarks are especially apposite when the report of the Judicature Commission makes it probable that our legal system will be reformed in the opposite direction. It is possible that in a few years this country will have its provincial courts sitting in the great centres of industry and commerce, and that little more than the proceedings in appeal will be brought to London. Everything, indeed, portends that the congestion of legal business in the capital, which now characterises our system, will be greatly lessened. If so, the scheme of an enormous legal Babel in the middle of London will fall to the ground, and the moderate building which will then be necessary may be erected on some more eligible site, and at a cost less absolutely outrageous."

The *Telegraph* says:—"Let us see how the matter stands. Already Parliament has decreed that the new law courts shall be built on the space between Carey-street and the Strand, and the ground is almost prepared for the builders. At a cost of no less than £850,000 we have pulled down the nest of houses that once occupied the spot, and have compensated the owners. At first sight, therefore, it might seem a matter of course that we should make use of the ground which has been obtained at the cost of so much labour and so much money. But, on the other hand, we have other considerations, of which Mr. Gregory made the most on Tuesday night. It is now found that the Carey-street site is too small, and that, to carry out the plans of the architects, and secure the convenience of the public, we must spend an additional £700,000. What the building itself will cost, Heaven only knows; but, since we must have a building in one of the places, we may, at present, leave that question out of sight. Mr. Gregory, however, has another plea. After paying one million and a-half for the bare ground, he tells us that we may have to pay ever so much more to make the courts accessible to the public. He argues that a new street must be run through Covent-garden to Lincoln's-inn-fields; another thoroughfare must be made between Farringdon-street and Carey-street. Again, King's College Hospital stands in the way, and it may have to be pulled down. The Law Institution also blocks the way, and that must certainly be levelled to the ground. Thus, an enormous expense would be thrown on the public, apart from the cost of the edifice itself. And, asks Mr. Gregory, what should we have for our money when the whole work should be completed? Nothing, he replies, but a big house so shut



in by small houses that it would not be seen. On the other hand, he contends that, for a smaller expenditure, we could obtain on the Thames Embankment one of the noblest sites that an artist could desire; grand approaches to the building by the Strand and the river side; freedom from the roar of the traffic; everything, in short, that the taxpayers, the architects, or the lawyers could covet. So far from being fascinated by the brilliant picture, Sir Roundell Palmer treated it with indignation. The Embankment advocates were, he said, mere dilettanti, and for the debates of dilettanti he entertained profound contempt. With him the sole question was, whether Carey-street would best suit the lawyers and the public. Sir Roundell contended that the Embankment site would cost much more than the sum which we have already paid for Carey-street; but, as everybody is in the dark on that subject, and as it can be matter of nothing beyond conjecture, we may for the present set it aside. The most formidable argument was that, if the courts were built by the river's side, the barristers would lose a great deal of time, for which, of course, the suitors would have to pay. On the other hand, were the courts located in Carey-street, the Lincoln's-inn barristers could reach the scene of action by merely crossing the road. Nor, it was urged, would their brethren of the Temple have to go many steps further. A bridge across Fleet-street would take them to the courts in two or three minutes. Narrow and technical as these arguments may seem, they are entitled to consideration."

The *Morning Star* says:—"Mr. Gregory was bitter in the extreme in his references to the Lincoln's-inn lawyers, to whose petty interests and prejudices he attributed the opposition to the Embankment site. The debate which followed afforded strong ground for supposing that this special imputation on the Lincoln's-inn solicitors and barristers is by no means well-founded. The Temple barristers make no fight for the Embankment site; nor do the City solicitors. There are 1,212 London solicitors, representing 3,875 country solicitors, to whom, from the places in which they live, the Carey-street site would be greatly more convenient than the rival situation. On the other hand, there are only 134 London solicitors, representing 477 country solicitors, to whom, judging by the same criterion, the Embankment site would be the more convenient of the two. The question is, we venture to say, between gratifying the public taste by a splendid building on the Embankment, and gratifying the lawyers by an eminently convenient building in Carey-street. All other things being equal, it may, perhaps, be said without reserve, that the lawyers ought to carry it. And perhaps their case is strengthened by one or two important minor considerations. For instance, the proposal to erect a grand building near Somerset-house is encumbered with a supposed necessity for remodelling the "dumpy domes and narrow windows" of the Somerset-house façade. This is rather alarming. Again, it must be allowed that the superior height of the Carey-street site gives it some status, even architecturally. And, once more, it would be fairer, in talking so much of the closeness and obscurity of the Carey-street site, to remember that it will have an open Strand aspect, which cannot fail, if completely treated, to be very splendid in its effect. After all, however, it is the question of money which will eventually settle this question. Mr. Lowe exposes the fallacy of the supposition that there is any fund, apart from the general revenue of the country, from which the expenses of this 'outrageous building' can be derived. In order to do what is necessary under these circumstances, the Chancellor of the Exchequer proposes to relieve the Commission of their duties, and to hand over the work to the Chief Commissioner of Works. The Government plan is to let the Carey-street plot lie till good offers are made for it, and to buy an Embankment site, bounded on the north by Howard-street (lying behind the Strand). This can be got for £600,000, and

the whole cost of a 'modest and manly' Palace of Justice, such as was originally contemplated on that site, will not, in the opinion of the Government, cost more than £1,600,000—about £100,000 more than the original Carey-street estimate. The issue is an entirely new one, and it was raised so late that the House was annoyed by its suddenness, and Mr. Henley was justified in demanding ample opportunity for its consideration; but the speech of Mr. Lowe, and his anticipation of a statement of plans which Mr. Layard is to make, while they revolutionise the whole subject, induce us to believe that the Government have found means of securing and well using an Embankment site, while at the same time saving the country a million and a half of money."

The *Daily News* says:—"There are simply two ways of regarding the question—that of show and that of use; that of facilitating the administration of justice, and that of building a handsome building; and it is not too much to say that all who supremely regarded the actual purpose of the building were on one side, and those who *thought* of scarcely anything but its appearance were on the other. Sir Roundell Palmer put the lawyers' view of the question in a speech which, from that point of view, was entirely conclusive. The great argument for the Carey-street site is that which has been reiterated from the beginning of the discussion, and was repeated by almost every legal speaker on Tuesday night. It is essential to the real value of the building that it should stand in the midst of a legal quarter. The Carey-street site was selected because nearly all the lawyers who have business in the courts can be in the courts from their offices in two or three minutes. Mr. Gregory ridiculed the idea of stalwart gentlemen objecting to four or five minutes' additional walk, and being afraid to cross a thoroughfare; but in those few minutes lie the waste of hours. It is very rarely that a court will wait five or six minutes after a case is called, and if the counsel and solicitors are not all present within three or four minutes the case is passed over, and must begin *de novo*. The question of five minutes' extra walk is, therefore, just the question whether barristers, solicitors, and others shall idle away hours in waiting for their cases to come on, or whether they shall run the risk of the case being passed over. Either way the expense to the public is so vastly increased that it is reckoned that every day thus lost by the profession costs the suitors no less a sum than £25,000. The Carey-street site is, therefore, not only the lawyers' site, but that of the clients too. We can scarcely believe that the House will consent to Mr. Lowe's suggestion, to put an end to the Royal Commission and begin again, unless some very clear, definite, and certain plan is before it, and a whole volume of information which has not been discovered as yet."

The *Standard* says:—"Mr. Gregory's speech on Tuesday night in support of the proposition to build the new Law Courts on the Thames Embankment was necessarily nothing but a *rechauffée* of the assertions and imaginings with which Sir Charles Trevelyan and Mr. Baillie Cochrane have urged the perpetration of that costly folly. The member for Galway took the leading points of the Embankment case as they are presented in Sir Charles Trevelyan's letter and in the discussions at the Society of Arts, and put them before the House with all that earnestness of delivery and ponderosity of humour which characterise his oratory. That the result was a failure, was not Mr. Gregory's fault as a speaker, but the consequence of the emptiness of the case itself. It did not need Sir Roundell Palmer's masterly speech to show that there are no sufficient grounds for interfering with the erection of the courts on the Carey-street site. Mr. Gregory sat down without having given a single reason which would have induced an impartial hearer to allow that a case had been made out even for delay or for further inquiry. Not only is the architectural adornment of the metropolis the object which the supporters of the Embankment site really have in view, but it is the best argument they have in favour



of the scheme. The contention that the Embankment site will cost less, and give greater facilities to the public, is an after-thought, and, what is more, utterly worthless, as anybody who will read Sir Charles Trevelyan's statements will see at once, and without any reference to the replies of the defenders of the present site. It may be admitted that it is desirable to have one building, or a series of buildings—public or private it does not matter—on the Embankment, between the Temple and Somerset-house, worthy of the neighbourhood; but it does not follow that we should place our Palace of Justice there. Mr. Street says, and he gives reasons of the utmost cogency in support of an opinion which his authority would of itself recommend, that the Carey-street or northern Strand site, is, architecturally, far superior to the Embankment site; and that a building of the character necessary for the purpose of concentrating the law courts and offices will be far more effective on the higher ground now cleared than on the lower level of the Embankment. We believe that this is a convincing reason in favour of erecting the law courts on the site at present fixed, looking at the matter merely from the *dilettante* point of view. But does it follow that the Embankment between the Temple and Somerset-house cannot be utilised for the adornment of London? Certainly not. The Board of Works, which owns the ground upon which the buildings "giving" immediately upon the Embankment-road and the river must be erected, can and ought to stipulate for such an architectural arrangement as would not only obviate all danger of disfigurement, but ensure all that Mr. Gregory and his friends desire."

### Colonies.

**SOAP-MAKING IN ADELAIDE.**—The manufacture of soap may now be added to the list of the local industries of this colony, a soap-boiling factory having lately been established at Port Macdonald, capable of producing about two tons of soap weekly. Besides the advantage of an important local industry in connection with this manufacture, the butchers will now find a ready market for tallow and fatty refuse, and the money hitherto sent out of the colony for the purchase of soap will, in part at least, be kept there for profitable employment.

**EMIGRATION FROM LIVERPOOL.**—During the quarter ending 31st March last, the number of emigrants from Liverpool was 20,789, showing an increase of 5,310 over the first quarter of last year.

### Forthcoming Publications.

**THE FOOD JOURNAL.** (*Wyman, Great Queen-street.*)—The object of this journal, which is shortly to be published quarterly, will be to present in one focus, and in a readable form, everything that relates to the food question, which has become one of the most important of the day, with a view to develop fresh sources and economise existing supplies. Special attention will be given to the Australian and colonial trade, and to the various efforts that are being made to introduce fresh meat into England, at prices accessible to all—while every new fact as to the chemistry and hygiene of food, both animal and vegetable, will be carefully noted. Original articles will be given on the sources and countries from whence our supplies are obtained—on the medical and sanitary relations of food, and on the requirements of the culinary department, whether gentle or simple, together with reports and information as to food statistics in every country, in connection with the physical condition of the inhabitants. The interests of the trade will be attended to by careful statements of prices, exports and imports, and Board of trade returns, both for agriculture and produce.

### Notes.

**PRESERVING MEAT.**—The following notification, dated Board of Trade, 12th April, appeared in the *London Gazette* of the 13th instant:—With reference to the notice inserted in the *London Gazette* of the 1st of January last, stating that the Argentine Government had offered a prize of £1,000 for the best system of preserving fresh meat, the Board of Trade have received from the Secretary of State for Foreign Affairs a copy of a further despatch from her Majesty's Minister at Buenos Ayres, reporting that the Government of the Argentine Confederation have issued a further decree, to the effect that the prize can only be obtained by those persons who, whether at home or abroad, have carried out their discovery in practice, and who produce the result at the Ministry of the Interior, in order that the scientific commission which will be named for that purpose may, after examining the results, adjudge the prize to the one offering the greatest advantages to industry. As a consequence of this decree the period for the presentation of proposals has been extended till the 31st of August next.

**SOUTH KENSINGTON MUSEUM.**—The Lord President of the Council has requested Sir Charles Wheatstone, Sir Michael Costa, Professor Tyndall, Lieut.-Col. Scott, R.E., Capt. Donnelly, R.E., and Mr. Bowley, to report on the acoustics of the new lecture theatre. There will be three trials; one by a lecture, with demonstrations, on musical pitch, by Professor Guthrie; a second by voices, directed by Mr. Arthur Sullivan, and the third by instruments, directed by Mr. Ella.

### Correspondence.

**MR. UNDERDOWN'S PAPER ON SPAIN.**—SIR,—I was unable to remain long enough at the meeting on the 14th inst., or I should have offered a few observations, expressive of disappointment that more facts or suggestions of an economical and commercial character were not given by Mr. Underdown. His paper had a stronger political tinge than the Society might have expected from its title. The recommendation that Spain should abandon Cuba, or any other colony, overlooks the fact that the best outlet for the energies and enterprise of a nation is in its colonies. What would be England's position, were it not for its colonies and dependencies offering us an ever-enlarging field for the manufacturing, commercial, and shipping interests at home, and for the stout hands and indomitable perseverance of those who leave our shores, either to settle in what would otherwise remain waste places, or else to become administrators in the governments of the colonies, and to return in numbers to their mother country, enriched by the results of their industry? Complaint was made by Mr. Underdown that the religious creed of Spain prevented national progress. But many of us Protestants will find ourselves unable to believe that the Roman Catholic faith, combined with that tolerance for other religions now inaugurated in Spain, will present any bar to economical and commercial improvement. We have the examples in point of Belgium and Austria, both eminently Roman Catholic countries, whose progress in manufactures and in commerce is remarkable. Mr. Underdown has not given sufficient credit to the efforts made in Spain, for many years past, to diminish the number of ecclesiastical functionaries to reasonable limits. In 1860 I read a paper to the Statistical Society of London on the "Statistics of Spain" (vide *Journal* of that Society, vol. xxiii.) in which I showed that, adding the number of monks (12,593) to the clergy, cathedral, collegiate, parochial, and regular (43,661 altogether), a grand total appears of 56,254 as the number in 1857. Comparing this with the proportions ascertained at previous periods, it will be found that the diminution, admitted to be a national blessing by all truly patriotic

Spanish writers, has been, respectively, from 1 in 43 of the population in 1769; down to 1 in 56 of the population in 1787; and to 1 in 275 of the population in 1857. There is no reason to doubt that a further large diminution has taken place since 1857. On the want of financial honour in Spain, Mr. Underdown is, I think, too sweeping in his condemnation. We must not forget that, within a very few years, Spain voluntarily came forward and discharged a debt to England that had gone out of the recollection of our statesmen, and the recovery of which had not entered into the imagination of our financiers. Then Mr. Underdown complained of jobbery in public enterprises and railways in Spain; but before we scrutinise the frost on our neighbour's tiles we should sweep the snow from before our own doors, and ask if railway contracting, and financing, and jobbing have not contributed many dark pages to the commercial history of England? Mr. Underdown takes exception to the too great preponderance of the military element in the Spanish population. That is a very difficult question to solve, as every nation of the importance of Spain in population, 15½ millions, must be the best judge of the amount of military force, offensive and defensive, it is necessary to keep up. As regards the national expense of its soldiery, an examination of the statistics in 1860, proved to me that it was extraordinarily low. And the experience of Spain, in its then recent campaign in Morocco, had shown of what good stuff the cheaply kept up army of Spain was composed, and that it could rank in military education, discipline, and *physique*, with the more expensive armies of other European powers. The members of our Society who, like Mr. Underdown, take a warm interest in the re-awakening of an active economical and social life in Spain, may not, perhaps, take it amiss if I venture to occupy a few more lines of your space in referring to the Society of Arts, Agriculture, and Commerce of Spain, known by the title of the Economic Society of Madrid (*Sociedad Económica Matritense*). This Society dates from the year 1775, and, in the now nearly 100 years since its first conception, has effected very much good in an economical and commercial point of view. It has always numbered amongst its members men of eminence in all parts of Spain, and has had the warm support of the government. It has affiliated to it many provincial societies (*Sociedades económicas de amigos del país*), and has a philanthropic branch, presided over by ladies of high social position (*Junta de Damas de honor y mérito*). Last year's lectures included many practical and interesting subjects, such as three by Don Antonio Balbin de Unquera, on "Foreign Benevolent Institutions, and their application to Spain;" those upon "Industry and Art in the Prehistoric Epoch," by Don Francisco M. Turbino; upon the "Calculus of Probabilities," by Don Augustin M. Alcibar, and upon the "Encouragement of Arboriculture," by Don José Salofre. The Society also has committees on the diffusion of knowledge and of public education, has a large library of works on arts, sciences, and agriculture, publishes memoirs of importance on these subjects, and offers prizes in each branch. For example, I see announced for this year:—1. A prize on the causes which lead to the silkworm disease, and on the methods of remedying it. 2. A prize on the manufacture of white and other wines not containing more than 12 to 14 per cent. of alcohol. 3. A prize for an analysis of the natural laws of agriculture of Baron Liebig, as applicable to the circumstances of Spain. 4. A prize for Spanish paper for printing purposes, superior to foreign paper of this class. 5. A prize for mineral oils of Spanish manufacture. 6. A prize for glass manufacture. 7. A prize for starch flour of rice, made in Spain, and competing in price and quality with wheat starch. 8. A prize for an essay on improved railway administration, particularly as regards the unification of charges for transit of goods. 9. A prize on the causes of failure of provincial banks of issue in Spain, and on

free banking. The Society has also recently taken the initiative in promoting the cultivation in Spain of the *Eucalyptus globulus* (Tasmanian blue-gum tree). Faithful to its motto of "*Socorre enseñando*," the Society has placed its services freely at the command of the new government of Spain, in the hope that a new era of prosperity may be, in no slight degree, assisted by the teaching of its members—friends of their country (*amigos del país*), as they deem themselves proud to be termed, and, as such, they will certainly deserve the best sympathies of our Society of Arts here.—I am, &c., FREDERICK HENDRIKS, Honorary Member of the Economic Society of Madrid.

MR. UNDERDOWN'S PAPER ON SPAIN.—SIR,—I observe that Mr. Marcoartu, in his remarks on my paper, states that minerals are found in all the provinces of Spain except Valladolid and the "Canaries." Only recently has it been discovered that in the Grand Canary, near Las Palmas, there is perhaps the most remarkable iron deposit in the world—a perfect shore of iron-sand. A patent for making this sand into bricks for the purposes of smelting, which I believe will be worked on the spot, is likely, as I am informed, to give remarkable results. Its situation of course gives great facility for shipment.—I am, &c., E. M. UNDERDOWN.

Temple, April 22, 1869.

#### MEETINGS FOR THE ENSUING WEEK.

- MON.....Society of Arts, 8. Cantor Lecture. Mr. John Anderson, C.E., "On Applied Mechanics."  
Social Science Assoc., 8. Education Department. Mr. Joseph Payne, "The Theory of Teaching compared with its ordinary Practice."  
R. United Service Inst., 8½. Col. T. Bernard Collinson, R.E., "A Proposition for one General Military School for the Army."  
R. Geographical, 8½. 1. Rev. F. W. Holland, "Recent Explorations in the Peninsula of Sinai." 2. Mr. Werner Munzinger, "Journey through the Afar Country."  
Actuaries, 7. 1. Mr. T. B. Sprague, "On the Value of Reversionary Annuities payable half-yearly, quarterly, &c., according to the conditions which prevail in practice." 2. Mr. H. W. Manly, "On Different Modes of Constructing Tables of the Value of Policies."  
Medical, 8.  
TUES...Royal Inst., 3. Prof. Grant, "Astronomy."  
R. Medical and Chirurgical, 8½.  
Civil Engineers, 8. Mr. Wm. Shelford, "On the Outfall of the River Humber."  
Ethnological, 8. 1. Mr. Wm. Blackmore, "Notes on some of the principal Tribes of the Indians of the United States, with a brief Account of the 1st Indian War." 2. Mr. E. T. Stevens, "Some Characteristics of the Stone Implements and Objects found in the Mounds of Ohio."  
WED...Society of Arts, 8. Mr. Roger Smith, "On the Duties of the Architect with reference to the Arrangement and Structure of a Building."  
Geological, 8. 1. Mr. T. C. Wallbridge, "On the Geology and Mineralogy of Hastings County, Canada West." Communicated by Dr. Percy. 2. Mr. J. W. Flower, "On the Distribution of Fossil Implements in the Drift, with reference to some Recent Discoveries in Norfolk and Suffolk." 3. Mr. W. Whitaker, "On a raised Beach at Portland Bill."  
R. Society of Literature, 8½. Dr. Ingleby, "On some Points connected with the Philosophy of Coleridge."  
Archæological Assoc., 8.  
London Inst., 12. Annual Meeting.  
THUR...Royal, 8½.  
Antiquaries, 8½.  
Zoological, 1. Annual Meeting.  
Royal Society Club, 6.  
Royal Inst., 3. Prof. Tyndall, "On Light."  
Society of Fine Arts, 8. Third Musical Evening. Conductor, Mr. A. Gilbert.  
FRI.....Royal Inst., 8. Mr. R. H. Scott, "On the Work of the Meteorological Office."  
R. United Service Inst., 3. Mr. Fred. Wingfield, "Military Transport."  
Society of Arts, 8. India Conference on the subject of Fibres. Chair taken by the Hon. George Campbell.  
SAT.....Royal Inst., 2. Annual Meeting.

#### PARLIAMENTARY REPORTS. SESSIONAL PRINTED PAPERS.

Delivered on 12th April, 1869.

- Par.  
Numb.  
63. Bill—Court of Exchequer (Ireland) Offices.  
66. „ Newspapers, &c.

125. Fenian Convicts—Return.  
130. Poor Law (Indoor Relief)—Return.  
141. Assessed Taxes and License Duties—Statement.

## SESSION 1868.

344. (B.) Poor Rates and Pauperism—Return (B).  
*Delivered on 13th April, 1869.*  
69. Bill—Post-office Savings Banks.  
70. „ Government Annuities, &c.  
126. Dublin Metropolitan Police—Abstract Account.  
134. Dartmouth, &c., Port—Correspondence.  
135. Convicts—Return.  
137. Admiralty—Correspondence.  
122. Civil Services, Revenue Departments, and Packet Service—  
Estimates (1869-70).  
Prison Discipline (Colonies)—Further Correspondence.

*Delivered on 14th April, 1869.*

68. Bill—Trades Unions, &c.  
71. „ Capital Punishment Abolition.  
72. „ Parochial Schoolmasters (Scotland).  
“Tornado” (No. 1, 1869)—Correspondence.  
Public petitions—Twelfth Report.

*Delivered on 15th April, 1869.*

73. Bill—Habitual Criminals.  
102. (i.) Maynooth College—Further Return.  
114. Ships' Lights—Correspondence.  
115. Rule of the Road at Sea—Correspondence.  
139. Lord Lawrence's Annuity—Resolution.  
142. Volunteer Capitation Grant—Memorial.  
Colonial Possessions—Reports, Part I., West Indies.

*Delivered on 16th April, 1869.*

74. Bill—Common Law Courts (Ireland).  
76. „ Oyster and Mussel Fisheries Supplemental.  
79. „ Endowed Hospitals, &c. (Scotland).  
80. „ Poor-law (Scotland) Act (1845) Amendment.  
08. (iv.) Civil Services (Vote 2, Class IV.)—Corrected Pages.  
113. Increase and Diminution (Public Offices)—Abstract of Accounts.

*Delivered on 17th April, 1869.*

78. Bill—Adulteration of Food or Drink Act (1860) Amendment.  
81. „ Hospitals, &c., Rating Exemption.  
48. Augmentation of Benefices—Return.  
127. Civil Offices (Pensions)—Returns.  
145. Barrack Repairs—Reports.  
047. Poor Rates Assessment, &c.—Report (reprint).  
Great Britain and the Zollverein—Declaration.  
Public Petitions—Thirteenth Report.

*Delivered on 19th April, 1869.*

144. Spirits—Returns.

*Delivered on 20th April, 1869.*

82. Bill—Militia.  
83. „ Water Supply.  
84. „ Mines Regulation.  
121. Cashel Election—Minutes of Evidence.  
147. Parliamentary Elections Act, 1868—Additional General Rules.  
149. Ecclesiastical Fees—Table.

## Patents.

*From Commissioners of Patents' Journal, April 16.*

## GRANTS OF PROVISIONAL PROTECTION.

- Anvils—1023—J. U. Askham.  
Bags, &c., locks and fastenings for—1006—M. Wolfsky.  
Ballot mechanism for facilitating voting by—1001—J. Cruttenden and T. Wells.  
Baking ovens—1040—A. V. Newton.  
Bulvers—1027—W. Jones and T. Sheffield.  
Boots or shoes, apparatus for putting on or taking off—1052—J. H. Teale.  
Bottling apparatus—1028—J. Winter, jun.  
Carriage shafts, &c.—1034—G. T. Bousfield.  
Cartridge cases—1062—W. T. Eloy.  
Caskets for jewels, &c.—1049—H. B. Barlow.  
Cements—1044—W. T. Rickard.  
Concrete building, apparatus to be employed in—1003—D. Osborn.  
Cotton gins—1072—J. A. Chaufourier.  
Cultivators—883—J. Fryer.  
Decorating surfaces—961—W. E. Cadman.  
Feeding infants, &c., apparatus for—987—E. O'Connell.  
Fire-arms, breech-loading—1055—W. Powell.  
Fire-arms, &c., breech-loading—1020—G. A. Ermen.  
Fire bars—1024—J. Fletcher.  
Food safes—1008—D. Nicoll.  
Fuel, &c., manufacturing compressed—1021—W. Johnson.  
Furnace doors—1042—W. Goodreds.  
Furnaces—655—W. H. Tooth, sen., and W. H. Tooth, jun.  
Furnaces—827—A. de Pindray.  
Gas, apparatus for the combustion of—1046—G. S. Chase.  
Glove fasteners—1056—W. H. Douglas.  
Grain, &c., beam-balance for weighing—1038—E. O'Brien.  
Guns, breech-loading—1043—J. Mason.  
Guns, working 921—J. Macintosh.  
Heating by steam for manufacturing and other purposes—1029—C. Cairns.

- Hydraulic presses—1058—G. Ashcroft.  
Iron safes, &c.—1026—W. G. White.  
Iron, utilising the ammoniacal skimmings obtained in galvanising—1070—J. Pattinson.  
Jet ornaments, &c.—1010—W. H. Douglas.  
Lamps—1018—F. W. H. Medhurst.  
Lavatories, &c.—1037—J. M. Johnson.  
Leather, composition for joining—1066—A. H. Brandon.  
Looms—1022—J. Woods, J. Hampson, and L. and G. Fish.  
Looms—1030—J. W. Drummond.  
Metal tubes, &c., cutting—1068—A. Stewart and J. Wotherspoon.  
Motive-power—1025—F. Tommasi.  
Oxidising agents, preparing certain—1059—W. H. Balmain.  
Paper, beating engines employed in manufacturing—1041—A. K. B. Granville.  
Paper-making machinery—1007—R. Allan.  
Paper, manufacturing—1033—G. T. Bousfield.  
Petroleum, &c., burning—845—C. E. Brooman.  
Planes—995—W. Bayne and O. E. MacGregor.  
Printing and copying presses—997—J. Bath.  
Pulleys for blind cords, &c.—851—F. Holmes.  
Pumps—1054—J. Robbins and J. Allbut.  
Railway carriages—69—F. S. Thomas.  
Railway carriages, &c.—1012—U. Scott.  
Railway signals—1074—W. T. C. Pratt.  
Railway wheels, &c.—1013—W. E. Broad.  
Railways—1050—W. R. Lake.  
Railways and tramways—1014—G. F. Griffin.  
Roofs—1016—S. Sharrock.  
Safety lamps—1002—W. Y. Craig and S. P. Bidder, jun.  
Seeds, &c., expressing oils from—1032—J. Sterriker.  
Sewing machines—1036—A. Helwig.  
Ships, applying sheathing to—1039—R. B. Hooper and T. and H. R. Nickson.  
Shuttles—1051—J. Menzies, sen., and J. Menzies, jun.  
Sleeve links—1057—W. H. Douglas.  
Soda and potash waste, utilising products arising from—1060—L. Mond.  
Steam engines—985—G. Holcroft and W. N. Dack.  
Steam generators—998—H. A. Fletcher.  
Steam generators—1061—W. E. Newton.  
Traction engines—1031—J. Greenslade.  
Umbrellas and parasols—991—J. Caplin.  
Umbrellas and parasols—1019—J. G. Tongue.  
Ventilating apparatus—1048—W. E. Gedge.  
Vessels, covers for, and clips for bottles placed in such vessels—1000—F. Schäfer.  
Watches and clocks—983—C. Lange.  
Wheels, &c., casting screw threads on the naves of—1045—R. Norfolk.  
Window fastenings—993—G. H. Wilson and G. E. Pullen.

## INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

- Dental wash—1138—J. H. Johnson.  
Fire-arms—1093—S. F. Van Choate.  
Paper, woven fabrics, &c., rendering waterproof—1090—W. R. Lake.

## PATENTS SEALED.

- |                                      |                                |
|--------------------------------------|--------------------------------|
| 3187. T. Wrigley & J. Richardson.    | 3221. J. H. Johnson.           |
| 3193. W. H. Howes.                   | 3224. E. O. W. Whitehouse.     |
| 3195. J. Rae.                        | 3228. F. Bennett and R. Ward.  |
| 3204. E. T. Hughes.                  | 3231. J. Ryder.                |
| 3205. E. Harrison.                   | 3250. J. Spratt.               |
| 3208. E. T. Hughes.                  | 3282. A. H. Smith.             |
| 3213. W. Maudslay and W. C. Rawlins. | 3298. A. Wilson.               |
| 3214. J. Westwood, jun.              | 3306. B. Dobson and J. Clough. |
| 3218. C. Shaw.                       | 3314. H. Wallwork.             |
| 3219. I. Holden.                     | 3362. J. Corbett.              |
| 3220. H. Clifton.                    | 3374. F. E. Martineau.         |
|                                      | 3449. C. E. Brooman.           |

*From Commissioners of Patents' Journal, April 20.*

## PATENTS SEALED.

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|----------------------------|---|
| 3093. J. and S. W. Varley. | 3359. B. Hunt.                          |
| 3240. J. Birch.            | 3392. W. Corden.                        |
| 3247. J. Bernard.          | 3400. P. E. de Wissocq.                 |
| 3254. G. Nurse.            | 3417. W. Riddle.                        |
| 3256. A. Giraud.           | 3424. W. S. Thomson.                    |
| 3257. W. Reid.             | 3450. J. Stephens.                      |
| 3259. S. Clark.            | 3470. J. C. MacDonald and J. Calverley. |
| 3261. H. Mayhew.           | 3542. J. Sims.                          |
| 3273. W. E. Gedge.         | 3567. J. H. Johnson.                    |
| 3288. W. D. Young.         | 3559. H. W. Fuller and I. W. Barum.     |
| 3290. E. T. Van Hecke.     | 545. G. A. Fall.                        |
| 3300. G. E. Donisthorpe.   | 713. H. A. Bonneville.                  |
| 3315. R. Oxland.           |   |
| 3343. G. F. Morant.        |   |

## PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

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|--|-------------------------------------|
| 1083. T. Halmes.                                       | 1208. E. J. Beard.                  |
| 1093. C. A. Girard and G. de Laine.                    | 1097. J. Holmes and J. C. H. Slack. |
| 1088. G. White.  | 1107. E. C. Nicholson.              |
| 1112. C. Hastings, J. Briggs, J. Law, and H. Mitchell. | 1152. R. Thompson.                  |

## PATENTS ON WHICH THE STAMP DUTY OF £100 HAS BEEN PAID.

- |                      |                              |
|----------------------|------------------------------|
| 1063. J. F. Spencer. | 1150. H. Lumley.             |
| 1113. J. W. Ford.    | 1078. G. Fell and W. Haynes. |
| 1127. C. D. Abel.    | 1164. J. C. Amos.            |